

THE PORTABLE

Companion

FOR OSBORNE COMPUTER USERS

MAR/APR 1985

#16 (VOL. 4 NO. 2)

USA \$5.00

• **Preparing Your Taxes With USTAX84**

• **Do-it-yourself Budget & Income Tax Spreadsheets**

• **The Wizard! Other Mysteries**

• **How Foggy Is Your Prose?**

• **Review of Typewriter**



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Q. Can I transfer programs from "foreign" computer formats and run them on my Osborne?

A. The answer is yes and no. In general, most "generic" 8-bit CP/M

software will run just fine on your Osborne. There are tens of thousands of public domain programs and hundreds of excellent commercial programs in this category. Software that makes use of machine specific hardware (such as most graphics packages) or software that does not include an "install" program for different cursor control commands will probably require modification before use on your Osborne.

Unfortunately, you cannot run 16-bit, IBM software on Osborne 8-bit computers. Nothing short of new hardware can make this possible, but most data files transferred to or from "foreign" formats (even the 16 bit formats) are completely compatible.

This means that Wordstar files, Lotus 1-2-3 files, dBase II data and command files, SuperCalc files and many other types of data files may be freely exchanged with other computers. For example, the same Wordstar file could be started on an IBM-PC running PC-DOS and finished on the Osborne using Wordstar under CP/M.

Q. Why are Apple, Commodore and Atari formats not included?

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THE PORTABLE **Companion**

FOR OSBORNE COMPUTER USERS MAR/APR 1985 #16 (VOL. 4 NO. 2) USA \$5.00

Publisher

Osborne Computer Corp.
Juanita Ferrier, Business Manager

Chief Editors

Tony Bove & Cheryl Rhodes

Contributing Editor

Brad Baldwin

Production

Sahnta Pannutti, Lon Shoemaker

Advertising

Annie Warren

Photography

Paul Winternitz

Circulation

Christine Clemmons, OCC
Bill Shoemaker
Kathy Slusser
Julie Swanson
Dan Shoemaker

Cover by Paul Winternitz.

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The Portable Companion (ISSN 0732-7501) is published bi-monthly by Osborne Computer Corporation as a tutorial aid for Osborne computer owners.

Subscription requests and change of address notifications should be mailed (please don't phone) to: Circulation Dept. c/o The Portable Companion, 42680 Christy Street, Fremont, CA 94538. Subscription rate is \$25 for one year prepaid (six issues), \$28 billed. International subscriptions are \$35 (prepaid U.S. \$) for Mexico and Canada, \$50 (prepaid U.S. \$) elsewhere. Back issues are available for \$4.00 each (issues after Oct. 1983 are \$5.00).

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Tax Advice

Osborne owners aren't timid; it is so written on the old envelopes used to promote *The Portable Companion*. You are probably not intimidated by the Osborne computer and SuperCalc's power to calculate spreadsheets like income tax forms.

We thought most of you would not be timid about using spreadsheets to calculate your U.S. income tax. Those of you living outside the U.S. can apply some of the information to your tax situation.

We include in this issue a do-it-yourself spreadsheet for keeping track of accounting data for income tax purposes (see "CalcAids"). We also include a feature on using USTAX84, a commercial package containing a complete set of templates for SuperCalc.

We put USTAX84 through the paces, showing sample results of an example taxpayer, but there is no way we can judge the complete accuracy of any income tax preparation software. The programs are usually not available until February of the year after the taxable year, giving you two months or less to use them.

What if the program makes an error and you don't catch it? The IRS would most likely treat any computer error the same way they treat mathematical errors — if you owe more, you have to pay the adjusted amount plus interest. (If they owe *you*, they will pay you the amount plus interest.)

You should keep a copy of the program you used to prepare your tax, plus a copy of the tax results, in a safe place in case of an IRS audit. If some colossal error occurred in your favor and the IRS was seeking to assess a penalty, you might change their minds by demonstrating the program you used and by

showing a copy of the results.

We can all hope for a more equitable tax system that is easy to use. In the meantime you can make your investment in an Osborne pay off in tax benefits. If you use your computer at home, you can qualify it as a business expense *if you keep a log of your activities* on the computer or can show evidence that you use the computer for business.

We have found that the best way to use our Osborne for income tax preparation is to use it to record our expenses and income with an accounting or checkbook balancing program that can summarize expense and income categories. Using such a program each week during the year, we are able to summarize data quickly and efficiently from each week's receipts.

At the year's end you might want to have a tax accountant to do your taxes (your summarized data may help lower the fee). If not, get some books on the subject and read the government forms. The tax programs and spreadsheet templates do not explain each line of the 1040 form or the other forms and schedules — you have to know what data to provide, and where. The spreadsheets let you try different strategies, but they assume you already know the strategies and have summary data in hand.

So don't expect tax advice from your computer program. The time has not yet come when computers can answer simple questions like "what's the minimum tax I have to pay?" You still have to do the work yourself. We hope you can ease the burden with one or more of the spreadsheets in this issue.

tb & cr

Doing Your Duty With USTAX84

Doing your taxes can be easier than you think with the USTAX84 set of SuperCalc spreadsheets for individual income tax returns.

Tony Bove & Cheryl Rhodes



Photo by Paul Winternitz

USTAX84 is by Quantum Resources (5615 Morningside Suite 232, Houston, TX 77005); it requires SuperCalc running on any Osborne or other CP/M computer as well as PC-compatible computers. You must supply your own tax forms.

Price: **\$49.00** (plus tax).

Updates: **\$20.00** (plus \$5 handling). Phone: (713) 660-8119.

Other products mentioned in this article:

Mini-Ledger from Paradigm Consultants, 39243 Liberty St. Suite L, Fremont, CA 94538. Phone: (415) 796-0543.

Checks & Balances from CDE Software, 2463 McCready Ave., Los Angeles, CA 90039. Phone: (213) 661-2031.

The Home Accountant from Continental Software, 11223 South Hindry Ave., Los Angeles, CA 90045. Phone: (213) 417-8031.

When we do our taxes, we spend nearly as much time filling out the forms and using the calculator as we do shuffling through our shoeboxes of receipts to find all the business expenses. There are two time-consuming tasks that can be shortened by using a computer: recording income and expenses, and doing "what if" calculations with the tax forms.

We used a dBASE accounting program to record our expenses and income, but you can use anything you find useful, such as Mini-Ledger (Paradigm Consultants), Checks & Balances (CDE Software), or The Home Accountant (Continental Software).

These programs are good for keeping track of expenses and income. All of them produce printed reports which you can use to prepare your taxes. None of them prepare taxes for you, nor do they prepare data electronically for a tax preparation program. In our case we wanted this separation of these applications because *we wanted* to the data manually and make "what if" calculations. You will probably want this flexibility, too.

To do income tax, we recommend you use a spreadsheet template such as USTAX84, which is for SuperCalc users. We recommend spreadsheet templates because they are less expensive than "stand-alone" tax programs, and since each year brings new income tax regulations, the spreadsheet templates are more likely to be up-to-date (because they are easier to re-program).

This article explains how to use USTAX84 to do your income taxes for 1984. The templates available for SuperCalc and other spreadsheet programs are very similar, so the information presented here might be useful for whatever spreadsheet template you might use.

What You Must Know First

You can't use an income tax program or spreadsheet as a substitute for a good book on tax accounting, because the program or spreadsheet cannot ad-

	A	B	C	D	E	F	G	H	
1	Form 1040	U.S. INDIVIDUAL INCOME TAX RETURN						1984*07	
2	Name(s):							Soc. Security no:	
3	Scott Yuppie							123-45-6789	
4	Home address:							Spouse Soc Sec no:	
5	123 Easy St. #A								
6	City, State, Zip:	occ > job							
7	New Urban USA 01010	spou occ>n/a							
8									
9	Presidential Campaign Fund \$1	Yes/no>						no	
10	Spouse	Yes/no>						no	
11									
12	FILING 1>	1 Single						check: 1	
13	STATUS 2>	0 Married filing joint							
14	3>	0 Married filing separate-						name>n/a	
15	4>	0 Head of household w/ qual-						name>n/a	
16	5>	0 Qualifying widow(er) w/ dependent-						yr died >n/a	
17									
18	EXEMP-6a>	1 <Self						<65	
19	TIONS b>	<Spouse						<65	
20							<blind	total: 1	
21	c>Dependent children first names-enter number of child.>							0	
22	>								
23	>								
24	d>Other Dependents								
25	-----Name-----						Relat.	Months	
26							\$1000?	>1/2?	
27									
28							Enter number of other dependents	>	
29	e>Total number of exemptions claimed						e:	1	
30									
31	INCOME 7	Wages, salaries, tips, etc.						7>	30000
32	8	Interest income						8>	700

Figure 1. The 1040 spreadsheet from USTAX84 is very similar to the pre-printed form.

	A	B	C	D	E	F	G	H
1	Sched B	INTEREST AND DIVIDEND INCOME						1984*08
2	Name(s):							Soc. Security no:
3	Scott Yuppie							123-45-6789
4								
5								
6	Part I 1	Interest income from seller financed mortgages						
7	Interest	(show name of payer)						
8	Income	>						1>
9	2	Other interest income (list)						
10		>						
11		>						200
12		>						500
13		>						0
14		>						0
15		>						0
16		>						0
17		>						0
18		>						0
19		>						0
20		>						0
21		>						0
22		>						0
23		>						0
24		>						0
25	3	Add lines 1 and 2. Enter on 1040, line 8						3:
26								700
27								
28	Part II 4	>						
29	Dividend	>						4>
30	Income	>						4>
31		>						4>
32		>						4>

Figure 2. The Schedule B spreadsheet from USTAX84 (interest and dividend income).

vises you on what deductions are legal, or which forms you should use.

Neither can the spreadsheets nor the documentation for them tell you how to do your taxes. They don't even explain themselves very well. You must know already what depreciation means, what to do with dividend income, what to do with mortgages and interest payments,

and what Schedules you need to file with your 1040 Form.

In most cases you have to know what Schedules you need. You won't have to look up taxes in tables, nor will you need a calculator when you use spreadsheet templates. But you must understand the 1984 Tax Schedules


```

1 A B C D E F G H
1: Sched C PROFIT/(LOSS) FROM BUSINESS OR PROFESSION 1984*09
2: Name of proprietor: Soc. Security No:
3: Scott Yuppie 123-45-6789
4: A Main bus >Yuppie Yunk Inc. product>antique junk
5: B Bus name/addr >123 Easy St. #A Emp ID>123-45-6789
6: Hometown USA 01010
7: C Inv. value method (1-Cost 2-Least of cost/market 3-other) > 2
8: E Acct method (1-Cash 2-Accrual 3-Other) > 1
9: F Changes between opening and closing inventories? Yes/no> yes
10: G Did you deduct expenses for an office in your home? Yes/no> yes
11: -----
12: PART I -- Income
13:
14: 1 a Gross receipts or sales 1a> 10210
15: b Less: Returns and allowances 1b> 410
16: c Net sales, line 1b from line 1a 1c> 9800
17: 2 Cost of goods sold ( Part III line 8 ) 2: 4533
18: 3 Gross profit, line 2 from line 1c 3: 5267
19: 4 a Windfall Profit Tax Credit or Refund in 1984 4a> 0
20: b Other income 4b> 0
21: 5 Gross income, add lines 3,4a, and 4b 5: 5267
22: -----
23: PART II -- Deductions
24:
25: 6 Advertising > 600 23 Repairs > 300
26: 7 Bad debts from sales > 20 24 Supplies > 200
27: 8 Bank service charges > 150 25 Taxes > 200
28: 9 Car/truck expense > 780 26 Travel/entertain > 100
29: 10 Commissions > 0 27 Utilities/phone > 200
30: 11 Depletion > 0 28 a Wages > 0 -----
31: 12 Depr & 179 from 4562 > 0 b Jobs cred> 0 -----
32: 13 Dues and publications > 100 c Diff 28c> 0
33: 14 Employee benefit prog > 0 29 Windfall Tax w/h 83 > 0

```

Figure 3. The Schedule C spreadsheet in the USTAX84 package looks like the pre-printed form but performs the calculations for you.

```

17 *****
18 *****U.S. TAX '84-DEPRECIATION CALCULATOR*****
19 *****
20 *****
21 ***** ACRS DEPRECIATION *****
22 *****
23 ---FIRST---
24 INPUT (ALL INFORMATION IN COLUMN E)
25
26 DESCRIPTION OF ASSET Small building
27 DEPRECIABLE BASIS OF ASSET 50000
28 ACRS LIFE OF ASSET (3,5,10,15) 15
29 YEAR PUT IN SERVICE 1984
30 MONTH PUT IN SERVICE (1,2,3,...12) 3
31 ASSET: REAL PROPERTY? (1=YES,2=NO) 1
32 AMOUNT OF 1ST YEAR EXPENSE 0
33
34 ---SECOND---
35 CALCULATE DEPRECIATION (HIT ! BUTTON)
36 ---FINALLY---
37 PRINT DEPRECIATION SCHEDULE (/ODA20:F60,P)
38 *****
39 ***** ACRS DEPRECIATION SCHEDULE *****
40
41 YEAR PERIOD YR 1 EXP DEPR EXP I T C ENDBASIS
42 ---
43 1984 1 .00 5000.00 5000.00 45000.00
44 1985 2 5500.00 39500.00
45 1986 3 4500.00 35000.00
46 1987 4 4000.00 31000.00
47 1988 5 3500.00 27500.00
48 1989 6 3000.00 24500.00

```

Figure 4. The USTAX84 package includes a depreciation spreadsheet that performs ACRS (shown here), declining balance and SYD schedule computations.

and get the ones you need.

Few spreadsheets look exactly like the pre-printed Schedules or Forms they calculate. You therefore have to print the spreadsheets and copy the numbers manually onto the pre-printed forms.

The USTAX84 manual is typical in

this regard: most manuals are vague about how to begin and how to set up your spreadsheet template. They require that you already know how to use your spreadsheet program — in this case, SuperCalc. This is reasonable since the USTAX84 template is not expensive (\$49). SuperCalc provides all

the calculator functions you need, but it will not calculate unless you or the template provides the formulas.

The USTAX84 package contains sixteen SuperCalc spreadsheet templates on a floppy disk and a skimpy 10-page manual. The documentation is sparse and terse but the spreadsheets are straightforward electronic versions of the pre-printed forms and schedules. As such they are very useful, easy to understand, and easy to use.

The version we received did not make use of the SuperCalc² feature that lets you consolidate separate spreadsheets, but it does make use of the /X (execute function) to execute a set of SuperCalc commands in a "command file" — in this case the command file prints the important areas of the spreadsheets without printing the formulas and work spaces.

With USTAX84 you have to load each schedule and fill it out as you would on paper, but all the calculations and totals are performed for you. USTAX84 imposes no restrictions on the order in which you enter data onto schedules and forms. You can start anywhere and calculate to completion any spreadsheet.

However there is no facility in SuperCalc to share data among spreadsheets (SuperCalc² has such a facility, but USTAX84 does not use it). You have to manually copy subtotals from one spreadsheet to another. However, if you organize yourself and have scratch forms and schedules to use next to your computer, you can fly through "what if" calculations with the spreadsheets.

Start With Form 1040 and Schedules B and C

You might start using USTAX84 by filling out the 1040 spreadsheet. Enter a 1 next to the appropriate filing status, leaving zeroes next to the ones not selected. Also enter a 1 next to any appropriate exemptions (see figure 1).

At line 8, interest income, you can simply fill in a total and move on if your total is less than \$400; otherwise the IRS requires you to fill out Schedule B for interest income over \$400. Leaving

the cursor on this line of the 1040 spreadsheet, you can save the 1040 in a new file with the /S command, clear memory with the /Z (zap) command, and load a blank Schedule B spreadsheet from a backup copy of the distribution disk with the /L command.

Schedule B (see figure 2) includes a section for dividend income as well as one for interest income. There is plenty of room to add text descriptions of items. The spreadsheet resembles the form itself, and the total for the interest income section is the amount you need for your 1040 spreadsheet (line 8).

While in Schedule B you can supply information about dividend income, and note down the total from this section for your 1040 spreadsheet (line 9a).

After filling out and saving Schedule B in a new file, you can "zap" memory with the /Z command and load your previously saved 1040 spreadsheet. After

	A	B	C	D	E	F	G	H
65								
66								
67	Sched D		CAPITAL GAINS AND LOSSES					1984*12
68								Page 2
69								
70	PART III -- Summary of Parts I and II							
71								
72	20	Combine lines 8 and 19					20:	-100
73	IF	LINE 20 IS A GAIN:						
74	21	If line 20 is a gain, enter the smaller of						
75		line 19 or 20, or zero			21:		0	
76	22	Enter 60% of line 21				22:	0	
77	23	Subtract line 22 from 20. Enter on 1040 line 13				23:	0	
78	IF	LINE 20 IS A LOSS:						
79	24	If line 20 is a loss, enter one of the following:						
80		a If line 8 is 0 or gain, 50% of line 20				0		
81		b If line 19 is 0 or gain, line 20				-100		
82		c If 8 & 19 are losses, line 8 + 50% of line 19				0		
83						24:	-100	
84	25	Enter here and on Form 1040 line 13 the smallest of:						
85		a The amount of line 24						
86		b \$3000 (\$1500 if married filing separate)				>	3000	
87		c Taxable income, as adjusted				>	0	
88						25:	0	
89								
90	PART IV - Computation of Post-1969 Capital Loss Carryovers from 84 to 85							
91								
92	26	Loss from line 8; If none, goto line 31				26:	-150	
93	27	Gain from line 19. If none, enter 0				27:	50	
94	28	Reduce loss on line 26 by any gain on line 27				28:	-100	
95	29	Smaller of line 25 or line 28				29:	0	
96	30	Sub. 29 from 28. This is your short-term carryover				30:	-100	

Figure 5. The second page of the Schedule D spreadsheet in the USTAX84 package shows the calculated totals for the 1040 Form and chooses the appropriate amount for line 24.

USTAX84 works well as a tax preparation tool, and for SuperCalc users it is probably the most complete and best organized income tax spreadsheet template.

	A	B	C	D	E	F	G	H
21								
22								
23	PART II -- Car Expenses							
24								
25	A	Number of months used				Car 1	Car 2	Car 3
26	B	Total mileage those months				>	15000	0
27	C	Business part of that mileage				>	15000	0
28	D	Date placed in service, mm/dd/yy				>	03/01/80	00/00/00
29								
30	ACTUAL EXPENSES							
31	1	Gasoline, oil, etc			1>	1440	0	0
32	2	Other			2>	2200	0	0
33	3	Total 1 and 2			3:	3640	0	0
34	4	Divide line C by B, above (%)			4:	100	0	0
35	5	Multiply line 3 by line 4			5:	3640	0	0
36	6	Depreciation			6>	0	0	0
37	7	Parking fees and tolls			7>	0	0	0
38	8	Total lines 5 - 7. Enter in			8:	3640	0	0
39		Part I line 3						
40								
41	MILEAGE RATE							
42	9	Smaller of 15000 or total mileage from line C				9:	15000	
43	10	Multiply line 9 by 20.5c, or 11c			>	20.5	10:	3075
44	11	Enter total mileage line C over 15000 miles					11:	0
45	12	Multiply line 11 by 11c					12:	0
46	13	Business part of interest, fees, tolls, taxes					13>	0
47	14	Total lines 10, 12, 13. Enter in Part I line 3					14:	3075
48								
49								

Figure 6. The automobile expenses section of the 2106 Form included in the USTAX84 package. You can change the 20.5 cents/mile by unprotecting the cell and typing a new cents/mile rate.

loading, SuperCalc leaves the cursor at the position it was in when you last saved the spreadsheet. This makes it

easy to leave one spreadsheet, use another, and, upon returning to the first one, find yourself at the same place.

Back in the 1040 spreadsheet, you put the amounts from Schedule B on lines 8 and 9a, and fill out 9b (the spreadsheet calculates 9c), and then move on to lines 10 and 11. At line 12 switch to Schedule C: first save the 1040 spreadsheet (with the cursor on line 12), then zap memory, and finally load a blank copy of the Schedule C spreadsheet from the backup distribution disk.

Our example Schedule C (business profit/loss) shows a small antique buying/selling business operated out of the individual's home (figure 3). Remember, these examples are *not* recommended filing procedures — they are merely examples of the calculations the spreadsheet can perform. The "cost of goods" line is calculated for you when you go to the bottom of the spreadsheet and fill in the beginning inventory, purchases and other costs, and ending inventory amounts.

The Schedule C spreadsheet looks just like the paper version but performs all the subtotal and total calculations, and automatically copies the cost of goods value from the bottom of the spreadsheet to the top.

The Schedule C spreadsheet does not calculate depreciation. You can use two spreadsheets included in the pack-

	A	B	C	D	E	F	G	H
65								
66								
67	Form 1040		U.S. INDIVIDUAL INCOME TAX RETURN					1984
68	Page 2							
69								
70								
71	TAX	33	Amount from line 32			33:		31370
72	COMPU-	34	a Itemizing: Sched A line 26			34a>		282
73	TATION		Caution: dependent w/ unearned income, check here >					
74								
75		34	b Not itemizing: charitable contributions			34b>		0
76		35	Line 34a or 34b from 33			35:		31088
77		36	\$1000 by total exemptions claimed on 6e			36:		1000
78		37	Taxable income, line 36 from 35			37:		30088
79		38	Tax. Enter '1' where from					
80			1 <Table Amount :	6139				
81			0 <X,Y,Z Amount :	6143				
82			0 <Sch. G Amount >	0		38:		6139
83								
84		39	Add. Tax 4970>	0	4972>	0		
85			5544>	0			39:	0
86		40	Total taxes, add lines 38 and 39				40:	6139
87								
88	CREDITS	41	Credit for dependents, Form 2441	41>		0		
89		42	Credit for elderly, Sched R	42>		0		
90		43	Residential energy, Form 5695	43>		0		
91		44	Political contribution credit	44>		0		
92		45	Total personal credits, add 41-44	45:		0		
93		46	Subtract line 45 from 40 (not less than 0)	46:		6139		
94		47	Foreign tax credit, Form 1116	47>		0		
95		48	General business credit, from form	48>		0		

Figure 7. The USTAX84 1040 Form automatically selects the appropriate tax table or schedule based on your filing status, although you can change the selection to make "what if" calculations.

	A	B	C	D	E	F	G	H
65								
66								
67	Form 1040		U.S. INDIVIDUAL INCOME TAX RETURN					1984
68	Page 2							
69								
70								
71	TAX	33	Amount from line 32			33:		31370
72	COMPU-	34	a Itemizing: Sched A line 26			34a>		282
73	TATION		Caution: dependent w/ unearned income, check here >					
74								
75		34	b Not itemizing: charitable contributions			34b>		0
76		35	Line 34a or 34b from 33			35:		31088
77		36	\$1000 by total exemptions claimed on 6e			36:		1000
78		37	Taxable income, line 36 from 35			37:		30088
79		38	Tax. Enter '1' where from					
80			0 <Table Amount :	6139				
81			0 <X,Y,Z Amount :	6143				
82			1 <Sch. G Amount >	6091		38:		6091
83								
84		39	Add. Tax 4970>	0	4972>	0		
85			5544>	0			39:	0
86		40	Total taxes, add lines 38 and 39				40:	6091
87								
88	CREDITS	41	Credit for dependents, Form 2441	41>		0		
89		42	Credit for elderly, Sched R	42>		0		
90		43	Residential energy, Form 5695	43>		0		
91		44	Political contribution credit	44>		0		
92		45	Total personal credits, add 41-44	45:		0		
93		46	Subtract line 45 from 40 (not less than 0)	46:		6091		
94		47	Foreign tax credit, Form 1116	47>		0		
95		48	General business credit, from form	48>		0		

Figure 8. On the USTAX84 1040 Form you can change your tax calculation to use the Schedule G tax calculated from the Schedule G spreadsheet.

age for calculating depreciation. The first calculates depreciation using the ACRS method (figure 4), the declining balance method and the SYD schedule method. The second one does straight-line depreciation. After calculating depreciation, transfer the figures to the blank Form 4562 spreadsheet to include with your return.

Schedules D and E and Employee Expenses

When you finish Schedule C you can note the calculated profit to copy to your 1040, then save this spreadsheet in a new file, zap memory, and load a blank copy of Schedule D to report any capital gain or loss.

The Schedule D spreadsheet calculates the gain or loss based on entries you type. A Form 2119 spreadsheet is provided for computing short-term gain from the sale or exchange of your principal residence.

The Schedule D spreadsheet is two pages long; the second page (figure 5) shows the calculated totals for your 1040 form. The spreadsheet displays computed subtotals for lines 24a, 24b and 24c, and chooses the appropriate amount for line 24. It also calculates the post-1969 long-term carryover to 1985 (to use with your 1985 return). Filling out the Schedule D spreadsheet is much less time consuming than filling it out on paper with a calculator.

Schedule E (rents, royalties from properties) is easy to fill out, and it sums depreciation amounts, but it does not compute depreciation. Schedule F (farm income) is not included, nor is Form 3903 (moving expenses).

Form 2106 (employee business expenses) is included and is very easy to fill out. The spreadsheet uses a mileage rate of 20.5 cents/mile (see figure 6). If you need to change it to 11 cents, you can use the /U command to un-protect the cell and change the rate. The spreadsheet does not automatically display the car expenses (line 3 of Part 1); you must choose either the actual expenses or the mileage rate computation. This is consistent with the paper form, although the spreadsheet could (but doesn't) display the larger of the two values.

With these schedules filled out you can complete the first page of your 1040 spreadsheet. The 1040 automatically calculates the total income (line 23) and adjusted gross income (line 32) unless you set the spreadsheet to manual recalculation (in which case you type an exclamation point to recalculate the spreadsheet).

Itemizing (Sched. A) and Computing Your Tax

To itemize deductions, fill out the Schedule A spreadsheet. Enter your filing status in the summary section and the spreadsheet applies the proper exclusion amount. You can try another fil-

ing status and compare results.

If you choose not to itemize deductions, you can put your total charitable contributions on line 34b and the 1040 spreadsheet automatically computes your tax.

If you itemized using Schedule A, copy the amount to the 1040 spreadsheet (line 34a) and the spreadsheet computes your tax (see figure 7) based on the Tax Table, or on the Tax Rate Schedules X, Y, and Z. The selection is made for you based on your taxable income and filing status, but you can change the selection by typing a 1 next to the selection you want, and changing the other 1 to a 0 (zero).

At this point you can try income averaging. Save the 1040, zap memory, and load Schedule G. Using past returns ('81, '82 and '83) fill out Schedule G. If you have an "averageable income" of less than \$3000, you are ineligible for income averaging.

If the averageable income is \$3000 or more, the Schedule G spreadsheet computes your tax. You should then save Schedule G and copy the tax amount to the Schedule G selection of line 38 of your 1040. You can then "deselect" the other tax selection (changing the 1 to 0) and select the Schedule G tax with a 1. Figure 7 shows the tax before selecting Schedule G; figure 8

	A	B	C	D	E	F	G	H
1	Sched SE	SOCIAL SECURITY SELF-EMPLOYMENT TAX						1984*18
2	Name(s):							Soc. Security No:
3	Scott Yuppie							123-45-6789
4								
5	-----							
6	PART I -- Regular Computation of Net Earnings							
7								
8	1	Net profit/loss from 1040 Sched F line 56 or 89,						
9		and farm partnerships, 1065 Sched K-1 line 17a				1>		0
10	2	Net profit/loss from 1040 Sched C line 32,						
11		and 1065 Sched K-1 line 17a (other than farming)						
12		Religious exemption via Form 4361, check here				>		
13							2>	1000
14	-----							
15	PART II -- Optional Computation of Net Earnings							
16								
17		1040 F line 31 or 87	>		0	test A:		1
18		1040 F line 56 or 89	>		0	test B:		0
19		1040 C line 32	>		1000	test C:		1
20		1040 C line 5	>		9800			
21		If this is zero, you cannot use this method:						2
22		Form 1065 K line 17b	>		0			
23		Form 1065 K line 17c	>		0			
24								
25								
26	3	Maximum income for optional methods, \$1600					3:	1600
27	4	Farm Optional Method					4:	0
28	5	Subtract line 4 from line 3					5:	1600
29	6	Nonfarm Optional Method					6:	1600
30								
31	-----							

Figure 9. The USTAX84 package includes Schedule SE (self-employment tax) and computes the tax using farm and non-farm methods.

other taxes and payments, and it calculates the total tax and the amount you should pay (or, if good luck prevails, the amount to be refunded to you).

Critique

One criticism we have for this package is that it does not come with a command (".XQT") file that could provide a

the need to note down totals and switch spreadsheets are minor inconveniences.

To their credit, they do provide an ".XQT" file that prints the various spreadsheets properly so that you don't print the formulas and scratchpad areas.

Compared to other tax spreadsheet templates, USTAX84 is well organized and has most if not all of the Forms and Schedules you need as an individual or married couple.

Tax templates based on other spreadsheet programs (such as Multiplan or Perfect Calc) are usually linked so that changes to one affect the other spreadsheets. Due to SuperCalc's limitations, USTAX84 does not link spreadsheets — you have to enter numbers manually on the 1040 spreadsheet. This can make the task more time consuming but it also gives you freedom to start anywhere and calculate any spreadsheet without affecting the others. You can also go right to the 1040 Form and make approximate entries in order to calculate "what if" situations.

For this reason we conclude that USTAX84 works well as a tax preparation tool, and for SuperCalc users it is probably the most complete and best organized spreadsheet template for 1984 income tax preparation.

You can't use an income tax program or spreadsheet as a substitute for a good book on tax accounting, because the program or spreadsheet cannot advise you on what deductions are legal, or which forms you should use.

shows the new Schedule G tax.

The USTAX84 package has a Form 2441 spreadsheet (child and dependent care expenses), but not Form 5695 (residential energy credit), nor any of the forms for general business credits. Schedule SE (social security self-employment tax) is easy to use and includes the optional farm and non-farm tax computing methods (figure 9).

There are no spreadsheets for the alternative minimum tax, for recapture of investment credit, for social security tax on tip income, or for taxes on an IRA.

The 1040 spreadsheet finishes with

link between the spreadsheets, automatically copying the totals from each spreadsheet to the 1040 spreadsheet. SuperCalc² provides the commands to implement this, but you need to have an intimate knowledge of the formulas and cell ranges to know how to perform complex operations such as the arithmetic consolidation feature of the /L (load) command.

Quantum Resources could improve this package for 1985 by providing an ".XQT" file that copied the data back to the 1040. However, for its low price, the package performs quite well, and

Screen Dumps & Other Mysteries

The Wizard takes on several problems including screen dumps, NEC single-sheet feeders, Vixen compatibility and Executive clock access.

Brad Baldwin

This month we take a look at ASCII screen dumps, port switchers, NEC single-sheet feeders, Executive external clock access, Vixen software compatibility, MAC attacks, and other concerns vital to the health and welfare of Osborne users everywhere.

Q: I have a MBASIC routine that

dumps ASCII characters from the Osborne 1 screen to a printer. It fails, however, to work on my Executive, even though I access video memory at starting address C000h. I've enclosed the program for your examination (figure 1) — help!

A: In the last issue, I wrote that direct

video memory access on the Executive, unlike the Osborne 1, requires a bank-switching routine to PEEK or POKE video RAM at port 7. To make your Osborne 1 program "Executive" compatible, add the following code:

```
3000 SAVEIT = INP(0) ␣
3010 A = SAVEIT OR 64 ␣
3020 OUT 0, A ␣
***** (your code)
3190 OUT 0, SAVEIT ␣
```

Osborne 1 users should call address &HF000 in line 3030 and ignore the bank-switching code.

Q: A dilemma: I have two serial devices that I alternate in using, but only one serial port on my Vixen computer. Can you suggest a less expensive way of switching ports between devices than the commercially available port switchers?

A: Port switchers, many of which sell for \$100 and up, are some of the most over-priced computer attachments on

```
3030 SS = &HC000
3040 WD = 80
3050 FOR LN = 0 TO 23
3060 BL = 0
3070 FOR CN = 1 TO WD
3080 CHR = PEEK(SS+CN+LN*128)
3090 IF CHR = 24 THEN BL = BL+1
3100 IF CHR = 24 THEN 3160
3110 Z$ = CHR$(CHR)
3120 IF BL = 0 THEN 3140
3130 FOR NBL = 1 TO BL: LPRINT " ";: NEXT NBL
3140 LPRINT Z$;
3150 BL = 0
3160 NEXT CN
3170 LPRINT
3180 NEXT LN
```

Figure 1. A reader's MBASIC routine that dumps ASCII characters from the Osborne 1 screen to a printer, but fails to work on the Executive.

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the market today. You can build your own RS232 switch in a few hours for less than \$10 using a handful of components (three DB 25 connectors, cable, box and switch). Most RS232-based peripherals require 12 or less lines to connect, so you might want to look for a 12 pole, 2 position "break before make" (non-shorting contact) switch. The mail-order firm of Mouser Electronics, Santee, Calif. (619-449-2222) has one for around \$2.00.

Q: *I recently purchased a NEC 5510 with a single sheet feeder attachment. Is there a way, from WordStar 2.26, to control the print head to prevent tearing my sheet-fed paper? The print head, initially resting at the left side of the printer, jams and rips the left edge of an injected 8 1/2" by 11" sheet of paper as it makes its first printing pass. (Although the equipment is six years old, the problem does not involve any sort of mechanical failure — just moronic engineering.) In its former life as a minicomputer printer, software executed printer control codes were used to set the print head at a new "rest" position away from the left side. Is this also possible from WordStar?*

A: Many printers have a special feature known as "Absolute Horizontal Tab" (AHT) that, when set once, causes the print head to move to and reference as the "home position" whatever column required. For the NEC 5510/20, the control code sequence is 1B 52 xx, where xx is the AHT column you specify. The correct AHT column is dependent upon the sheet feed guide settings and sheet feed design, but try 40 for starters and modify that number up and down as needed. Patch the sequence to WordStar's printer initialization program using INSTALL at the internal label PSINIT: or direct address 06E7.

You may also have to add the following dot commands at the beginning of each printed file in order to properly eject and align each sheet:

.po 40 ␣
.mb 14 ␣
.pl 72 ␣

The default paper length is 66 for 11" paper (6 lines per inch). Increased page length serves to eject the paper completely free from carriage and pinch rolls. At the same time, the bottom margin is set to 14 counteracting increased page length. Note that the page offset might not be necessary — it depends upon how your vintage 5510 reacts to the AHC command.

Q: *How compatible is Executive or Osborne 1 software to the Vixen?*

A: The Vixen operates under CP/M 2.2 and is designed to run most Osborne 1 and CP/M 2.2 software. For example, SuperCalc II works on the Vixen as does dBASE II ver 2.4 (with the 80-column patch found on page 23 in the Nov/Dec '84 *Portable Companion*). Osborne 1 communication software, however, will not work. No problem, many user groups have a Vixen compatible version of Modem 7 (MDM740) public domain communications package in their libraries.

Q: *I've encountered some problems with William D. Esteb's article "Faster than a Shooting WordStar" in the Nov/Dec '84 Portable Companion. I followed the directions to the tee, but the changes to WordStar ver 2.26 failed to shorten the booting time at all. There was one incongruity between the example in the magazine and the info that appeared on my screen. After loading WS.COM with DDT, under the word NEXT appeared the number 3880 instead of 4000. Is this the problem? What can I do to overcome it?*

As long as I have your ear, I have been unable to get the heading command (.HE) to function. Any suggestions there?

A: After running DDT, Esteb's WS 2.26 indicates a 0100h to 4000h length (hexadecimal). My copy, like yours, is 0100h to 3880h. Esteb's page calculation is incorrect for his particular WS: he should save 63 pages instead of 56. Perhaps you're already ahead of me —

the 56 page figure is correct for our WS copy — not his. At any rate, the error is insignificant because anyone with a WS version that indicates 0100h to 3880h from DDT should correctly use the 56 page figure.

The patches work as shown, albeit providing only a minuscule change in speed for WS 2.26. Maybe you were expecting a quantum difference in speed and didn't notice the small change. WS 3.30 users, however, experience a much faster booting WordStar.

A reader pointed out to us that with the "Shooting Star" patches, WordStar no longer waited for his second command character when in Help Level 2 (*Letters*, page 50 Feb. '85 issue). He found that keeping address 02D1h (WS ver 2.26) or 02B1h (WS ver 3.30) at the original default value put an end to the over-responsiveness of the help-screens.

To answer your .HE command question, perhaps the problem is due to adding .MT and .HM commands with numerical values that do not provide ample space for a heading. If that's not the case, then compare your Initial Print Format labels (INITPF) with those found in the WordStar Customization notes (Nov/Dec '84 issue *Wizard* column) to make sure the values were not altered.

If none of this sleuthing pans out, your WordStar is buggy. Write again and provide a phone number so we can expedite getting you a properly-working WordStar.

Q: *I'm looking for a book that provides an in-depth discussion on MAC and RMAC, the macro assembler and relocating macro assembler from Digital Research. I also need information on the LINK-80 utility program. The Executive manual has nothing on the subject and Z80 or 8080 assembler books on the market seem equally devoid in discussing macro assemblers.*

A: First, for our readers' general information, a brief explanation on what these programs are about: MAC translates 8080 assembly language statements and produces an absolute object file in hex format suitable for processing

in the CP/M environment. MAC is upward compatible with ASM, CP/M's non-macro assembler. RMAC, on the other hand, produces a relocatable object file (REL) rather than an absolute object file that can be linked with other RMAC or MicroSoft format REL modules. LINK-80 combines REL modules into an absolute file ready for execution under CP/M.

Digital Research sells a comprehensive four volume set of manuals containing the *Programmer's Guide for CP/M Plus*, *Programmer's Utilities Guide for the CP/M Family of Operating Systems*, *Symbolic Instruction Debugger Reference Manual* and *CP/M Plus User's Guide*. The *Utilities Guide* manual fully explains MAC, RMAC and LINK-80, and includes information on format, operands, assembler directives, operation codes, inline and store macros, applications, debugging and error messages/codes, switches, overlays and LIB-80 operation. The manual also lists dozens of sample programs.

Contact Digital Research at PO Box 579, Pacific Grove, Calif., 93950 for or-

dering information and current price. Expect to pay around \$50 for this bundled set. If you take your programming seriously, it's well worth the cost.

Q: *I have an old device that needs a 300 baud clock sent to it from the Executive on pin 24. Any advice on how this might be accomplished?*

A: The Executive's baud rate common clock is indeed sent out on pin 24 of the modem port but the signal is inverted and conforms to RS232 voltage levels. Your device will need 1/4th of a 1489A quad RS232 receiver to transform it back to TTL levels. (Author's note: reader received circuit sketch by mail.) Set the baud rate and assign the modem port device via SETUP as you would any other attached peripheral.

One note of caution: OCC erred by assigning *both* serial and parallel ports under the SETUP menu for Executive system software. You must unassign the parallel port to prevent the BIOS ERROR - UNASSIGN THIS DEVICE? message from pop-

ping up during communications. (Likewise, parallel port users should unassign the serial ports in their SETUP routine.)

Coming up in the next Wizard: A complete tutorial on how to align, repair and troubleshoot MPI, Siemens and Alps disk drives; disk read/write, screen write and CPU performance benchmarks testing the OCC product line (how fast is the Vixen compared to other CP/M and MS/DOS machines?); and other goodies your mother and OCC never told you.

NOTE

OCC does not review, edit, advise, approve or censor the Wizard column. All technical advice (and misadvice) presented here is entirely my responsibility.

o

Brad Baldwin is a partner at Sheehan/Baldwin/Campeau Communications in Silicon Valley.

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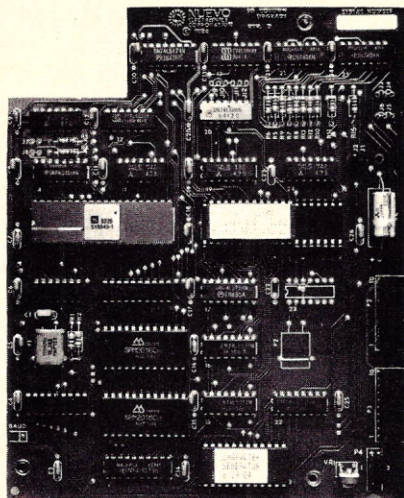
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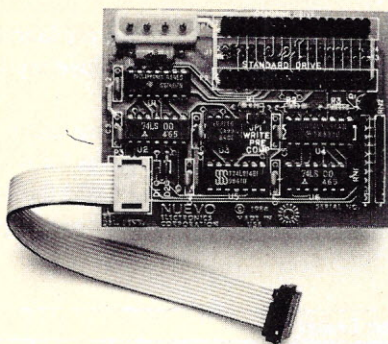
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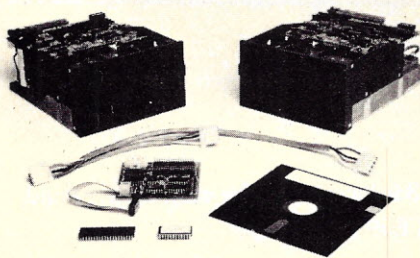


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Louie Crew

The Chinese Univ. of Hong Kong

I bought my computer to serve as a word processor only, but the mysteries of SuperCalc continued to intrigue and intimidate me, rather like a worker I once hired to rake leaves who spent his tea breaks explaining quantum mechanics. Still, for too long I kept posting my daily expenses in pencil in a fancy old ledger, wishing I could harness the brain power available at my keyboard.

Even done by hand, my calculations pleased the IRS. I gloated when their auditor told me that I had the best records he had seen in six months. Thus encouraged, I finally took the

plunge, and in only an evening I converted my laborious scheme to SuperCalc spreadsheets that reduce my labor by hours each month.

Figure 1 demonstrates the main ledger, by which I account for income and expenses in all the categories for which I pay by cash or check. At the end of the year I add the other one-time categories of income and expenses that never go through

Figure 1. *The Master Ledger.*

Notes to Figure 1

Format Column A to accept text of up to 20 characters: /FCA20

Format all columns for dollar display: /F6\$

Line 43 will be different when the ledger is used for cash and for checks: Line 43 is income for the cash account and debit for the checking accounts. Adjust the balancing formulas in cells E58 and E59 accordingly:

For the cash ledger,

CREDITS: SUM(G43:G55)

DEBITS: SUM(G9:G41)

For the checks ledger,

CREDITS: SUM(G47:G55)

DEBITS: SUM(G9:G43)

For the year's ledger, Line 43 belongs in neither credits or debits:

CREDITS: SUM(G47:G55)

DEBITS: SUM(G9:G41)

	A	B	C	D	E	F	G	H	I	J
1: Louie Crew's Account for:										
2:										
3: CASH OR CHECK?										
4:										
5: DEBITS=====										
6:										
7: AUTOMOBILE-----										
8: GAS:							SUM(B8:F8)			
9: INSURANCE:							SUM(B9:F9)			
10: OTHER:							SUM(B10:F10)			
11: CLOTHES:							SUM(B11:F11)			
12: CONTRIBUTIONS-----										
13: ORGANIZATIONS:							SUM(B13:F13)			
14: CANDIDATES:							SUM(B14:F14)			
15: ENTERTAINMENT:							SUM(B15:F15)			
16: FOOD:							SUM(B16:F16)			
17: HOUSEHOLD:							SUM(B17:F17)			
18: INTEREST:							SUM(B18:F18)			
19: LIQUOR:							SUM(B19:F19)			
20: MEDICAL-----										
21: DENTIST:							SUM(B21:F21)			
22: DOCTOR:							SUM(B22:F22)			
23: DRUGS:							SUM(B23:F23)			
24: PROFESSIONAL-----										
25: BOOKS, JOURNALS:							SUM(B25:F25)			
26: EQUIPMENT:							SUM(B26:F26)			
27: MEMBS., REGIS.:							SUM(B27:F27)			
28: STAMPS:							SUM(B28:F28)			
29: SUPPLIES:							SUM(B29:F29)			
30: TELEP. CALLS:							SUM(B30:F30)			
31: PROF. TRAVEL-----										
32: FARES:							SUM(B32:F32)			
33: LODGING:							SUM(B33:F33)			
34: MEALS:							SUM(B34:F34)			
35: RENT:							SUM(B35:F35)			
36: SAVINGS:							SUM(B36:F36)			
37: TAXES:							SUM(B37:F37)			
38: TELEPHONE (EXC. T):							SUM(B38:F38)			
39: UTILITIES:							SUM(B39:F39)			
40: YMCA:							SUM(B40:F40)			
41: MISC. NON-DEDUCT.:							SUM(B41:F41)			
42:-----										
43: FROM CHECKS TO CASH:							SUM(B43:F43)			
44:-----										
45: INCOME=====										
46:-----										
47: DIVIDENDS:							SUM(B47:F47)			
48: REIMBURS. TRAVEL:							SUM(B48:F48)			
49: HONORARIA:							SUM(B49:F49)			
50: MANUSCRIPTS SOLD:							SUM(B50:F50)			
51: MISCELLANEOUS:							SUM(B51:F51)			
52: PROPERTY SOLD:							SUM(B52:F52)			
53: SAVINGS CASHED:							SUM(B53:F53)			
54: TAX REBATED:							SUM(B54:F54)			
55: WAGES WITH W-2s:							SUM(B55:F55)			
56:										
57:										
58:	BALANCE FWD.:									
59:	CREDITS:					SUM(G?:G55)				
59:	DEBITS:					SUM(G8:G?)				
60:	NEW BALANCE:					E57+SUM(E58-E59)				


```

:      A      :: B :: C :: D :: E :: F :: G :: H :: I :: J :
1:Louie Crew's Account for:
2:
3:  CASH for August:                                TO DATE
4:
5:DEBITS=====
6:
7:AUTOMOBILE - - - - -
8:  GAS:                30.58                                30.5
9:  INSURANCE:
10: OTHER:                5.25                                5.25
11:CLOTHES:
12:CONTRIBUTIONS- - - - -
13:  ORGANIZATIONS:
14:  CANDIDATES:
15:ENTERTAINMENT:        24.00      8.77      1.00                                33.77
16:FOOD:                  29.93     15.35     40.00     4.20                                89.48
17:HOUSEHOLD:            40.00      .74                                40.74
18:INTEREST:
19:LIQUOR:
20:MEDICAL: - - - - -
21:  DENTIST:
22:  DOCTOR:
23:  DRUGS:
24:PROFESSIONAL - - - - -
25:  BOOKS, JOURNALS:
26:  EQUIPMENT:
27:  MEMBS., REGIS.:
28:  STAMPS:                9.35      1.89      2.29      4.10      1.79                                19.42
29:  SUPPLIES:              8.60      2.10      8.75                                19.45
30:  TELEP. CALLS:
31:PROF. TRAVEL - - - - -
32:  FARES:                6.00      6.00                                12.00
33:  LODGING:
34:  MEALS:
35:RENT:
36:SAVINGS:
37:TAXES:
38:TELEPHONE (EXC. T):
39:UTILITIES:
40:YMCA:
41:MISC. NON-DEDUCT.:    9.00                                9.00
42: - - - - -
43:FROM CHECKS TO CASH:  200.00                                200.00
44: - - - - -
45:INCOME=====
46: - - - - -
47:DIVIDENDS:
48:REIMBURS. TRAVEL:
49:HONORARIA:
50:MANUSCRIPTS SOLD:
51:MISCELLANEOUS:
52:PROPERTY SOLD:
53:SAVINGS CASHED:
54:TAX REBATED:
55:WAGES WITH W-2s:
56:
57:      BALANCE FWD.:      125.60
58:      CREDITS:            200.00
59:      DEBITS:             259.69
60:      NEW BALANCE:        65.91

```

Figure 2. Sample month's postings.

	A	B	C	D	E	F	G	H	I	J
1: Louie Crew's Account	1983									
2:										
3:	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY			
4:										
5: DEBITS=====										
6:										
7: AUTOMOBILE -										
8: GAS:	25.20	31.03	36.50	60.79	20.00	56.47	26.00		255.99	
9: INSURANCE:	41.43	.00	.00	.00	183.00	.00	68.00		292.43	
10: OTHER:	48.67	.00	.00	259.09	.00	.00	75.00		382.7	
11: CLOTHES:	12.95	6.83	31.11	7.95	.00	11.20	237.30		307.34	
12: CONTRIBUTIONS -										
13: ORGANIZATIONS:	10.00	40.00	115.51	45.00	30.00	53.00	260.00		553.51	
14: CANDIDATES:	.00	.00	.00	.00	.00	.00	10.00		10	
15: ENTERTAINMENT:	76.25	399.16	144.81	260.91	65.99	386.02	131.45		1464.59	
16: FOOD:	337.64	260.98	210.80	307.58	220.91	273.91	280.49		1892.31	
17: HOUSEHOLD:	57.47	6.83	.00	.00	106.27	.00	.00		170.57	
18: INTEREST:	.00	.00	.00	.00	.00	.00	.00			
19: LIQUOR:	64.04	66.90	50.66	61.75	37.80	.02	94.73		375.90	
20: MEDICAL -										
21: DENTIST:	.00	.00	.00	.00	18.00	.00	.00			
22: DOCTOR:	.00	.00	.00	.00	.00	.00	.00			
23: DRUGS:	.00	15.17	.37	9.66	.00	.00	1.88			
24: PROFESSIONAL -										
25: BOOKS, JOURNALS:	44.40	65.45	124.70	115.60	46.75	29.50	77.54		503.94	
26: EQUIPMENT:	3500.00					204.50	100.00			
27: MEMBS., REGIS.:		48.00	53.00	10.00	-5.00	18.00	.00		124.00	
28: STAMPS:	64.23	20.82	34.03	63.90	60.91	40.34	3.10		287.33	
29: SUPPLIES:	106.05	185.90	586.38	169.40	61.36	142.71	211.95		1463.75	
30: TELEP. CALLS:	25.83	38.40	15.18	12.67	40.34	11.56	36.20		180.18	
31: PROF. TRAVEL -										
32: FARES:		41.00	88.95		16.00	40.55	343.11		5	
33: LODGING:	50.00		60.00				.00			
34: MEALS:			125.78	11.50	20.16	41.92	160.28		359	
35: RENT:	255.00	255.00	255.00	255.00	255.00	255.00	510.00		2040.00	
36: SAVINGS:	1030.00	30.00	2817.00	30.00	30.00	30.00	30.00		3997.00	
37: TAXES:	.00	.00	.00	.00	.00	.00	.00			
38: TELEPHONE (EXC. T):								6.17	43.26	
1.32	24.76	35.79	11.12	3.34		123.12				
39: UTILITIES:	129.54	133.40	86.86	128.69	59.05	42.20	61.96		641.70	
40: YMCA:	24.50	39.13	24.50	24.50	24.50	49.50	24.50		211.13	
41: MISC. NON-DEDUCT.:	61.20	34.53	2.50	57.86	94.76	.74	-5.00		246.59	
42: -										
43: -										
44: -										
45: INCOME=====										
46: -										
47: DIVIDENDS:						39.38	.00			
48: REIMBURS. TRAVEL:			50.00	213.95	15.00		.00		278.95	
49: HONORARIA:			175.00	100.00			200.00			
50: MANUSCRIPTS SOLD:				35.00		25.00	30.00			
51: MISCELLANEOUS:		34.00			5.00		28.99			
52: PROPERTY SOLD:	2871.70	100.00	300.00	679.32	4.78		.00		3955.80	
53: SAVINGS CASHED:	3500.00						1818.23			
54: TAX REBATED:		322.62	1876.84							
55: WAGES WITH W-2s:	1229.05	1227.81	1227.30	1227.31	1220.30	1220.31	1174.13		8526.21	
56:										
57: BALANCE FWD.:				38.58						
58: CREDITS:				20951.02						
59: DEBITS:				20372.97						
60: NEW BALANCE:				616.63						

Figure 3. Partial sample of a year's ledger.

my cash or checking accounts, such as group insurance payments, federal and state taxes, etc.. These are deducted from my paychecks monthly but before the paychecks are deposited into either cash or checking accounts. Since my employer gives me a full printout of those at the end of the year, I don't waste time in posting them monthly.

I keep four spreadsheets at any one time — the ledger in figure 1 plus three variations: a ledger to post monthly cash transactions (figure 2), a ledger to post monthly check transactions (a duplicate of figure 2 with minor changes specified in the commentary to figure 1), and a ledger to display the monthly totals from both cash and checks (figure 3). The totals at the bottom of each spreadsheet conveniently inform me of my current balance at any one time and provide help when I

I bought my computer to serve as a word processor only, but the mysteries of SuperCalc continued to intrigue and intimidate me, rather like a worker I once hired to rake leaves who spent his tea breaks explaining quantum mechanics.

balance my checkbooks and reconcile them with bank statements.

At any one posting, I simply sort out all receipts according to the 55 categories, and type / = and the line number for each. Then I protect and save all postings to date.

The following shows how I protect and save postings (↵ stands for the Return key, and ^ stands for the Control key):

To protect:

/P ← You type
/Protect, ← SuperCalc displays

A1:L60 ↵ ← You type

To save:

/S ← You type
/Save, ← SuperCalc displays

B:CASH,A ← You type this, or
B:CHECKS,A ← this (whichever ledger.)

Then I store the receipts and the cancelled checks in envelopes appropriate to the categories, clipping together all those for any one month for easier access.

At the end of each month, I print out the cash and check ledgers for that month. The code for doing so in condensed mode on my Epson printer is:

/00 ← You type
/Output,display, ← SuperCalc displays

A1:L60 ↵ ← You type

Enter codes (CR when done):_ ← SuperCalc
/Output,display,A1:L60,Setup ← displays

^0(ESCape key)0 ↵ ← You type

Then at Column I on the cash ledger, I load the Column G totals from the check ledger:

For the cash ledger,

CREDITS: SUM(G43:G55)
DEBITS: SUM(G9:G41)

For the checks ledger,

CREDITS: SUM(G47:G55)
DEBITS: SUM(G9:G43)

Column K automatically supplies me with the month's grand totals. I save the cash ledger and enter the year's ledger so that I can load Column K (the month's totals from both cash and checks) into the column for the appropriate month on the year's ledger (figure 3), using the procedures for partial loading already illustrated above.

If ever the postings for any one month require more columns than I have given them, I simply add new ones, always before the first SUM column (initially Column G in figure 1).

Not one of the four spreadsheets ever requires more than 9K. The blank ledger requires only 6K. I always save backups. Since I print out each month's ledgers for posting checks and cash, I do not need to save the disk copies. I merely empty the data from those files and use them for the next month's data once I have entered the old month's totals in the year's ledger.

At tax time, the year's reports direct me to important totals that I will need in special categories of my 1040 forms. As a writer, for example, I know that I am entitled to deduct at line 26 of Schedule A the costs of my office space in my apartment — the amount of space (1/5) times the household expenses in my lines 17, 35, and 39. At the same line 26 of Schedule A, I am also entitled to specify and deduct my other professional expenses totalled in my lines 25-30.

Each taxpayer has individualized budget and tax needs. The general principle is to study your most recently successful IRS forms. Establish separate line items in your ledger for each category you need for tax purposes, as well as for any other categories you want to monitor.

Since I don't want to memorize my line assignments, I print out several copies of my blank ledger for reference at any spot where I might do my accounting.

SuperCalc is not just for CPA's. Anyone who can use a keyboard can harness SuperCalc's power very quickly.

NewWord Upgrade

The continuing saga of WordStar vs. NewWord, this time comparing NewWord 2.13 to WordStar 3.3.

Cheryl Peterson

In the letters section of the last issue of *The Portable Companion*, Tim Perrin had a few complaints about my review of NewWord. I'd like to use this month's column to address those complaints and let you know about a great deal being offered by NewStar software: NewWord version 2.13 for \$100.

First though, let me offer my thanks to Mr. Perrin for his generous article contribution in the last issue of *The Portable Companion*. His article on how to patch WordStar to use the print spooler option is very well done and I am sure many of you readers who are still struggling to get the most out of WordStar will find the article very useful.

Perrin's letter points out that NewWord does not contain a print spooler. Neither does my WordStar 3.3. I don't believe in patching up programs that I paid good money for, especially when doing so means I have to give up commands I really like (like UNDO and dot commands to set my margins, instead of control codes).

By using any number of patches (or enhancement programs available from user group public domain software libraries and developed and donated by WordStar users worldwide) you can also get WordStar to:

- Have a blinking cursor.
- Do print spooling.
- Let you embed print control codes in your text.
- Use all the fancy stuff your printer does.
- Reposition the flags so you can see them on a 52 column screen.

My review of NewWord 1.18 was written before WordStar 3.0 (let alone 3.3) was available for the Osborne 1. Although Tim's complaints were valid, I feel comparing an early version of one program to the latest and greatest upgrade of another is unjust. Now that both upgrades are available, I still feel that NewWord is by far the better program. Although it lacks a print buffer, I wouldn't dream of giving up its enhanced features.

I noticed Perrin's chief complaint of NewWord was the printer control attributes. NewWord 2.13 addresses the problems Perrin had with the program, and more.

First, the italics modification for the Epson printer, documented but not implemented in the earlier version, works correctly in NewWord 2.13. The ^PY toggle does in fact turn italics on and off.

The microspace justification still does a lot of unnecessary travelling (as described in Tim's letter), increasing the

chance of printer mechanical failure by adding extra wear and tear to the printer. (By the way, I tried microspace justification on my Epson RX-80 FT+ and my Mannesmann Talley 160-L.) Other enhancements more than make up for this problem, but the next update of NewWord should address this weakness.

Since Perrin is fond of sending special control codes to the printer to do fancy footwork, I'm sure he'll love NewWord's programmable control codes. Yes, from anywhere in your document you can reassign the codes sent to the printer for ^PQ, ^PW, ^PE, and ^PR. By simply inserting dot commands, these four controls can be redefined however you like, whenever you like. Try that from inside WordStar.

NewWord also has two more print control codes: ^P[and ^P]. These can be set using the Install program and reset using dot commands, just like the other four.

Being a fan of patches, I don't know how Perrin could have missed that in Appendix C, "User Area Listings", the NewWord manual mentions that the memory location to adjust for the superscript and subscript roll is 0710. Although initially set for 3, it can be changed using the H option of the Main Menu of the Install program. But since

that's a little too much for people like me, NewWord 2.13 has an added option in one of the Install menus to change the amount of superscript and subscript roll.

NewWord's upgrade is much easier to customize. (I'm afraid I disagree with Perrin's statement that WordStar 3.3 is easier to install than the original NewWord. I have both and think they are about equal.) NewWord 2.13 has a lot more initial setup options that can be changed, but is no more difficult to use than WordStar's install. (See table 1.)

As Perrin also pointed out, the earlier version of NewWord didn't have a column mode. NewWord 2.13 does and it's an improvement over WordStar's. When in column mode, a flag appears in the status line. Another flag appears to indicate when column replace mode is active.

In WordStar, when you move a column block out of an area, everything to the left automatically moves to the right. NewWord will do this, or you can choose to have the space be left open, allowing you to insert something there later. This feature is called column replace because when it is on, it replaces moved or deleted blocks with spaces. You most appreciate this feature when you want to leave space for an illustration.

NewWord can move columns between files easily even if both files are written as columns. According to WordStar's documentation, this can be accomplished only by a very roundabout method with WordStar. You must mark a regular (i.e., not columnar) block, write it as a file, and then edit out the junk. Or write the column by itself at the end of the file, mark it as a block, write it to a file and then delete it from the end of the file. Using either method, you then read the new file into the second document.

In NewWord, a column move between files is done the same way as any other move. Mark the corners of the column to be moved. Write the block to a file using ^KW and then read it into the new file using ^KR. When a new piece is read into a column mode file, NewWord checks to be sure the incoming text is formatted as a column. If not, it warns you so you can abort the insertion or

DEFAULT SETTINGS YOU CAN INSTALL

Where indicated "Y", these default settings can be set to the values you find most comfortable, so that each time you start the program you can go right to work. Most NewWord default settings can also be changed from within a document, using dot commands or control codes for more flexibility.

<u>NW</u>	<u>WS</u>	<u>Screen display information</u>
Y	N	INITIAL SIGN ON TEXT
Y	Y	HELP LEVEL
Y	Y	RIGHT JUSTIFY ON/OFF
Y	N	STATUS LINE DISPLAY ON/OFF
Y	N	WORD WRAP ON/OFF
Y	Y	INSERT MODE ON/OFF
Y	Y	HYPHEN HELP ON/OFF
Y	N	PRINT CONTROL DISPLAY ON/OFF
Y	N	RULER LINE DISPLAY ON/OFF
Y	Y	DIRECTORY DISPLAY ON/OFF
Y	N	BLOCK MARKER DISPLAY ON/OFF
Y	N	DEFAULT FIND AND REPLACE OPTIONS
Y	N	MAXIMUM UNERASE SIZE
Y	N	REQUIRE ↵ FOR Y/N PROMPTS
Y	N	SORT THE DIRECTORY (alphabetically)
Y	N	DEFAULT RULER FOR NEW DOCUMENT
<u>NW</u>	<u>WS</u>	<u>Document format information</u>
Y	Y	TOP AND BOTTOM MARGINS
Y	N	HEADER AND FOOTER MARGINS
Y	Y	LEFT AND RIGHT RULER MARGINS
Y	N	LINE SPACING
Y	N	DECIMAL AND NORMAL TAB STOPS
Y	N	SUBSCRIPT AND SUPERScript ROLL
Y	N	LINE HEIGHT
Y	Y	PAGE NUMBER ON/OFF
Y	N	PAGE NUMBER COLUMN
Y	Y	PAGE LENGTH AND OFFSET
Y	N	COLUMN MODE ON/OFF
Y	N	COLUMN REPLACE ON/OFF
<u>NW</u>	<u>WS</u>	<u>Print options</u>
Y	Y	USE FORM FEEDS
Y	Y	PAUSE AFTER EACH PAGE
		<u>File options</u>
Y	N	MAKE BACKUP FILES
Y	N	SUPPRESS FILE TYPES (UP TO 8)
		<u>Optional characters</u>
N	Y	ASSIGN DECIMAL POINT CHARACTER
N	Y	ASSIGN DATA FIELD SEPARATOR
N	Y	ASSIGN MAILMERGE VARIABLE NAME SYMBOL

Table 1. The default settings you can set using the Install programs provided with WordStar and NewWord are labeled "Y."

continue and then realign the information later.

As for Perrin's complaint that the Osborne delete key is disabled, what's wrong with using ^H? It works fine for me!

He mentions a memory problem using NewWord. The new version takes less space on disk, so I must assume it also occupies less space in memory. Maybe there is enough room to run SmartKey, but with the print formatting capabilities of the new version of NewWord, I can't imagine why he'd need it.

Before I got the upgrade to NewWord, I bought the WordStar upgrade. I planned to do columnar printouts of some of the articles I've had published. I also purchased the Enhancer, from Sudden! Products. I figured the two of them might just duplicate the print capabilities of NewWord.

That idea lasted for almost 30 minutes before I threw up my hands in frustration and went back to my trusty friend NewWord. The column moves worked fine, as did the newly enhanced print control codes, but NewWord had spoiled me.

I was used to being able to embed a few dot commands in the text to change the print size and be done with it. With WordStar I had to enter a print control code and then the escape code for the desired print function every time I needed to change the type size. This process just seemed entirely too much trouble

Now that both NewWord and WordStar upgrades are available, I still feel that NewWord is by far the better program. Although it lacks a print buffer, I wouldn't dream of giving up NewWord's features.

to go through for a project that would only save a few dollars in copy machine fees. Now that I have NewWord 2.13, I might reconsider the project when I have some spare time.

I thought the original NewWord documentation was one of its best features, but they have improved it for version 2.13. The information is the same, but the old 8¹/₂" by 11" by 1¹/₂" tome is now a smaller 7" by 9" by 1" manual

DIFFERENCES			
NW	WS	Command	Function
Y	N	^QP	Find a page.
Y	N	^QB	Reformat entire document.
Y	N	^PK	Alternate corners for page numbers.
Y	N	^N	In non-document mode initializes automatic indent. In document mode can be set to either change hard carriage returns to soft or enter a hard carriage return.
Y	N	^U	Unerase last edit.
Y	N	.LM	Set left margin.
Y	N	.RM	Set right margin.
Y	N	.LS	Set line spacing.
Y	N	.h2	2nd header line.
Y	N	.h3	3rd header line.
Y	N	.f2	2nd footer line.
Y	N	.f3	3rd footer line.
Y	N	.pfdis	Reform paragraphs with variables only (for use with merged documents to make margins look right).
Y	N	.pfon	Reform every paragraph.
Y	N	.pfoff	Don't reform paragraphs.
Y	N	.pg	Restore default page number.
Y	N	.rp(x)	Repeat print (x) times.
N	Y	^QQ	Repeat last command.
N	Y	.sr	Change subscript and superscript roll.

Table 2. A list of features of WordStar 3.3 and NewWord 2.13 not offered by both programs. Features not listed (for example, microspace justification) are offered by both programs.

which includes a section on the new enhancements.

A comparison of features (eliminating those both contain) still leads me to conclude NewWord is a better program than WordStar (see table 2).

of NewWord, but because they hadn't met their sales quota the original authors (NewStar) have decided to market the upgrade.

NewStar offers all Osborne versions of NewWord 2.13 for \$100. Although 2.13 is an upgrade to the old package, they feel the price tag is right in line with what MicroPro wanted for their upgrade. (They think MicroPro is silly to offer an upgrade and continue to sell the old program at its original price, forcing the new buyers to get the upgrade.) If you already have NewWord, the upgrade price is \$100, or buy version 2.13 of NewWord for \$100. (By the way, NewWord is available for other machines at a higher price.)

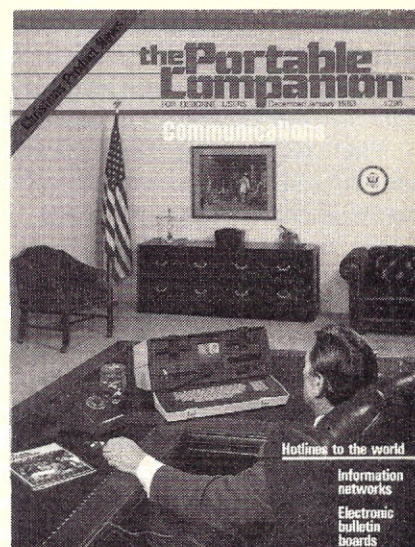
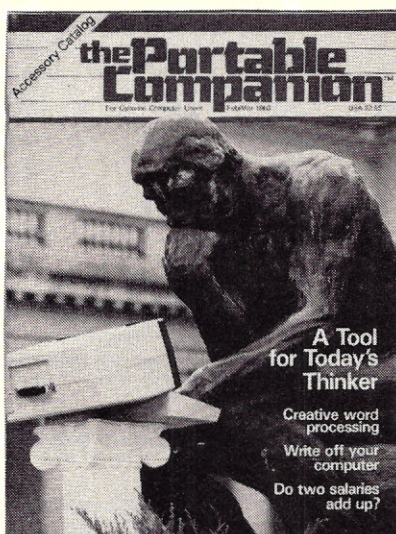
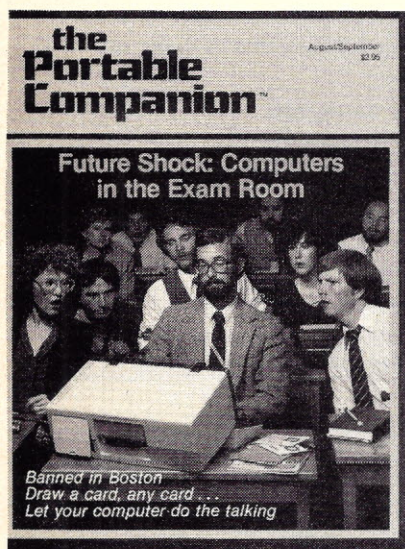
I stand by my conclusion that NewWord offers a good deal more than WordStar. I think most Osborne users would better spend \$100 getting NewWord 2.13 than by getting the upgrade to WordStar 3.3, especially now that MicroPro has raised their upgrade price.

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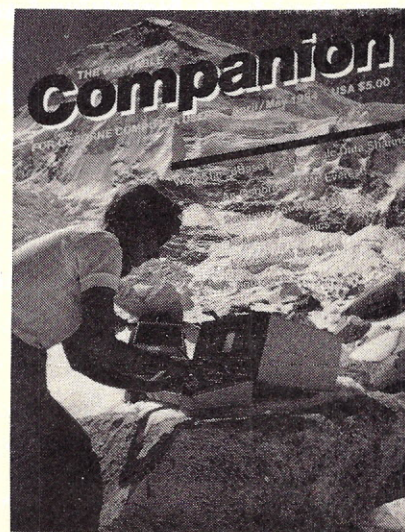
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Letters

Users Group on CompuServe

Getting ready to go on the Osborne Users Group on CompuServe, tonight, I am impelled to wonder why so few Osborne users join this group.

It is certainly not expensive, an initial package for CompuServe sells for about \$20, at most any computer store. The usage rate is \$6.50 per hour, and I usually stay on the group about 45 minutes; I have fun and I learn much. For example, I had ordered an 80 column conversion from one source. I mentioned it on CPIS and was told that the package I had ordered was not totally compatible, but that I could order another one, for the same price, which was [compatible].

While I am an amateur, there are professional programmers usually in the group, and they are always ready, willing and able to help with any problem. I've often wondered why Osborne has never had a member in the group. I have made friends and exchanged a lot of good software through this activity.

So let's see more people, Wednesday evenings at 9:30 EST. To save screen space, it is customary to use a handle, which is a shortened version of your name. My handle is RalphN. Hope to see you soon.

Ralph Nottingham
Deerfield Beach, FL

Emphasize Beginners

One thing that I would like to see in the magazine is more emphasis on the "Beginner's Tips" section and also a section devoted to getting out some

public domain programs. Even if only one program were listed each issue it would be nice. What do you say?

Dan Grant
Pendleton, OR

OK, Dan. You'll see the beginner's section every issue. We're working on the public domain section. Listings of useful programs may take up too much space, and public domain programs are available from many different user groups. We will probably focus on reviewing good public domain programs and providing access information.

Note that FOGHORN, a newsletter published by FOG, and other user group newsletters routinely publish articles about public domain software which they also make available. It may be easier to order software from such a user group than re-type a long program listing.

Keyboard Mysteries and WordStar Delays

Are your readers aware that the Osborne 1 can display characters that are not on the keyboard? The symbols {, }, ~, and ' can be accessed by using the Control key instead of Shift when typing (,), ? and + [respectively].

Also, regarding the article "Faster Than A Shooting WordStar" in the Nov. '84 issue, the delay routine that determines how long WordStar's sign-on message is displayed is also used by WordStar during help level 2. It determines how long WordStar waits during a 2 key command entry before giving help.

Wayne P Hammond
Colonial Heights, VA

Faster WordStar?

First, I'm glad to have both you and OCC back in business. I like my Oz 1 a lot, but I was afraid I had an Edsel that would be hard to find parts for and get fixed.

I try to avoid hacking because it's a sinkhole for time, but I've made some minor improvements to WordStar using the special function keys for faster log-on, and I set one WS disk up for the idiosyncratic margins used by scriptwriters, inspired by an article in an old issue of *The Portable Companion*.

So even though I've been a very heavy Oz user for a couple of years, I'm no more than a novice hacker. Thus, I was intrigued by the promise in the November "Beginner's Tips" to show me how to soup up WordStar 2.26 for a faster boot. "And isn't faster what word processing is all about?" asks the article's author. Sure, I thought, WordStar is a bit slow to boot, come to think of it.

I immediately peeled off the write-protect tab from my WS disk, stuck it in [drive] B:, stuck my CP/M disk in [drive] A:, booted up, and DDT'd WS.COM as instructed. I write-protected (oh, the lingo!) my WS disk again, being paranoid about lost or overwritten files, having done it once to a valuable file on a data disk at the cost of *hours* of work. I slipped it into [drive] A:, booted it, hit Return, and counted: One thousand one, one thousand two... one thousand eleven. Eleven seconds!

I stuck an unmodified WS disk into A:, booted it, hit Return, and counted... to 12! One second's difference! Of course, to be fair, that's an 8.3% savings. I guess that's not insignificant, accumulated over a couple of years, but somehow it doesn't seem, well, *real*.

Nonetheless, isn't faster what hacking is all about?

Continued on page 29

How Foggy Is Your Prose?

This MBASIC program uses the Fog Index formula to analyze your sentences and count your syllables.

Alex Lane

As a writer, what you say can sometimes get lost in how you say it. Consider the following quote:

Objective considerations of contemporary phenomena compels the conclusion that success or failure in competitive activities exhibits no tendency to be commensurate with innate capacity, but that a considerable element of the unpredictable must be taken into account. (George Orwell).

Compare Orwell's mouthful to the following:

The race is not to the swift, nor the battle to the strong, neither yet bread to the wise, nor yet riches to men of understanding, nor yet favor to men of skill; but time and chance happen to them all. (Ecclesiastes 9:11).

Which would you rather read? Which brings home the message?

Over the years, researchers in readability have worked out formulas to estimate the relative readability of text. In general, an index is obtained from

Figure 1. Listing of TEXTFOG.BAS file

```
100 ' TEXTFOG.BAS
105 '
110 ' by Alex Lane
115 '   Jacksonville, FL
120 '
125 ' This program reads lines of file text and
130 ' works up a factor (from 0 to 10) that reflects
135 ' text readability.
140 '
145 ' The text file must first be run through the
150 ' CP/M PIP [Z] option to cull out all the high
155 ' bits and soft carriage returns.
160 '
165 ' The program assumes 3 letters per syllable and
170 ' calculates the average number of syllables per
175 ' word (variable ASYLWRD) and the average number
180 ' of words per sentence (variable AWRDSEN).
185 '
190 ' We use the following ranges:
195 ' 1.27-1.75 for syllables per word
200 ' 8-29   for words per sentence
205 '
210 ' The following are counted as letters:
215 '   upper and lower case letters [a-z, A-Z]
220 '   numerals [0-9]
```



```

225 '
230 ' The following are counted as sentence endings:
235 '   period+space+space
240 '   period+double quote
245 '   period+single quote
250 '   period+right parenthesis
255 '   period+right bracket
260 '   a pair of en-dashes
265 '   ellipsis
270 '   exclamation point
275 '   question mark
280 '   semicolon
285 '   colon
290 '
295 TB$=CHR$(9)      -'tab defined
300 SP$=CHR$(32)     -'space defined
305 DQUO$=CHR$(34)   -'double quote defined
310 SQUO$=CHR$(39)   -'single quote defined
315 RPAREN$=CHR$(41) -'right parenthesis defined
320 DOT$=CHR$(46)    -'dot/period defined
325 RBRACK$=CHR$(93) -'right square bracket defined
330 DEFINT L-Z:ON ERROR GOTO 750
335 PRINT CHR$(26) -'clear the screen
340 PRINT"File to be analyzed"
345 INPUT"      (include drive, if necessary)";FI$:IF FI$ = "" THEN 345
350 INPUT"Starting line (0 for file beginning)"; SL
355 INPUT"Sample length (default is 100 lines)";LN
360 IF LN=0 THEN LN=100
365 OPEN "I",#1,FI$
370 ' The next line helps wade through the file to
375 ' the starting line.
380 IF SL>=2 THEN FOR I=1 TO SL-1:LINE INPUT #1, W$:NEXT I
385 '
390 ' Lines 400-600 comprise the main loop.
395 ' The variable J represents the line count.
400 FOR J=1 TO LN -
405 IF EOF(1) THEN 605
410 LINE INPUT #1, M$:PRINT "***";M$
415 LINEFLAG = 0          'no words on line
420 ' In line 440, if M$ is a dot-command or
425 ' comment, or if
430 ' it has no length, ignore it (decrement the
435 ' linecount J).
440 IF LEFT$(M$,1)=DOT$ OR M$="" THEN J=J-1:GOTO 600
445 FOR I=1 TO LEN(M$)      'scan the line
450   SB$=MID$(M$,I,1)
455   IF SB$<>SP$ AND SB$<>TB$ THEN LINEFLAG = -1
460   IF (LINEFLAG) AND SB$=SP$ OR SB$=TB$ THEN WORDS = WORDS + 1:LINEFLAG=0:
465   IF (ASC(SB$)<123) AND (ASC(SB$)>96) THEN LETTERS = LETTERS + 1
470   'add a letter if lower case is found
475   IF (ASC(SB$)>91) AND (ASC(SB$)>64) THEN LETTERS = LETTERS + 1
480   'add a letter if upper case is found
485   IF (ASC(SB$)<58) AND (ASC(SB$)>47) THEN LETTERS = LETTERS + 1
490   'add a letter if a number is found
495   IF MID$(M$,I,3)=DOT$+SP$+SP$ THEN SENTENCE = SENTENCE + 1

```

calculations that depend on a variety of factors such as word length, the number of words, sentence length, and so on.

One of the first rating formulas was developed during World War II and was called the Fog Index. A high index was meant to show that a piece of writing was harder to read than some other writing having a lower index.

Other indices, resulting from subsequent research, have been developed over the years. Some formulas take account of proper names and word repetition, so that unusually long names — like "Czechoslovakia" — or often-repeated words don't unduly hike the index. One scheme even considers the intended audience, so that a word like "specification" doesn't count for much in text intended for engineers.

One of the less complex formulas — a "Reading Ease" test developed in 1948 by Rudolph Flesch — has been modified and automated in the MBASIC program TEXTFOG.BAS. A listing appears in figure 1.

Flesch's test used two factors — the number of syllables per word, and the number of words per sentence — to gauge the readability of a writing sample. Since our program lacks the ability to detect syllables, we define a syllable to be 3 letters long. This number was arrived at manually by selecting words at random from a college dictionary and doing the necessary math.

Preparing a Sample File

If, using CP/M, you TYPE a text file prepared using the WordStar D option, you'll see a confusing jumble of underlines and graphics characters mixed in with the text.

This is because WordStar sets the high (eighth) bit of certain characters for its own purposes. Any such text file to be analyzed by TEXTFOG must first be run through the [Z] option of the CP/M PIP program, which resets these bits.

With the file to be analyzed in drive B: — call it FILENAM1.EX1 in this example — put the CP/M system disk in drive A and type:

```
PIP B:FILENAM2.EX2=B:FILENAM1.EX1[Z]␣
```



```

500 'add a sentence when period+space+space is found
505 IF MID$(M$,I,2)=DOT$+DQUO$ THEN SENTENCE = SENTENCE + 1
510 'add a sentence when period+quote is found
515 IF MID$(M$,I,2)=DOT$+SQUO$ THEN SENTENCE = SENTENCE + 1
520 'add a sentence when period+right-bracket is found
525 IF MID$(M$,I,2)=DOT$+RPAREN$ THEN SENTENCE = SENTENCE + 1
530 'add a sentence when period+right-parenthesis is found
535 IF MID$(M$,I,2)=DOT$+RBRACK$ THEN SENTENCE = SENTENCE + 1
540 'add a sentence when period+right-curly-bracket is found
545 IF MID$(M$,I,2)="-" THEN ENDASH = ENDASH + 1
550 IF ENDASH = 2 THEN SENTENCE = SENTENCE + 1:ENDASH = 0
555 'add a sentence for each pair of en-dashes
560 IF MID$(M$,I,3)="..." THEN SENTENCE = SENTENCE + 1
565 'add a sentence for each ellipsis
570 IF SB$="!" THEN SENTENCE = SENTENCE + 1
575 IF SB$="?" THEN SENTENCE = SENTENCE + 1
580 IF SB$=";" THEN SENTENCE = SENTENCE + 1
585 'add a sentence for each semicolon, q-mark, and e-mark
590 NEXT I' do the next character
595 IF LINEFLAG THEN WORDS = WORDS + 1
600 NEXT J' do the next line
605 CLOSE #1
610 '
615 'output
620 '
625 PRINT"Words = ";WORDS
630 PRINT"Sentences = ";SENTENCE
635 SYLLABLES = LETTERS/3!
640 ASYLWRD = SYLLABLES/WORDS
645 AWRDSEN = WORDS/SENTENCE
650 PRINT"Syllables/word = ";ASYLWRD
655 PRINT"Words/Sentence = ";AWRDSEN
660 '
665 ' Now to keep everything within limits
670 IF ASYLWRD<1.27 THEN ASYLWRD=1.27
675 IF ASYLWRD>1.75 THEN ASYLWRD=1.75
680 IF AWRDSEN<8 THEN AWRDSEN=8
685 IF AWRDSEN>29 THEN AWRDSEN=29
690 '
695 ' And now, the point...
700 '
705 ASYLFAC = (ASYLWRD-1.27)/(1.75-1.27)
710 ASENFAC = (AWRDSEN-8)/(29-8)
715 FOGFACTOR = ASYLFAC*1.8 + ASENFAC*3.2
720 PRINT
725 PRINT"On a scale of 0 (very easy) to 10 (very hard)"
730 PRINT"the scanned text in ";FI$;" rates a ";FOGFACTOR
735 END
740 '
745 ' Error routines
750 IF ERL=345 THEN RESUME 335
755 IF ERL=640 THEN PRINT "No words encountered":GOTO 765
760 IF ERL=645 THEN PRINT "No end of sentence encountered"
765 PRINT"Something went wrong...TRY AGAIN!":END

```

Now, FILENAM2.EX2 (or whatever name you select) is ready to be analyzed.

About the Program

In line 330, all variables starting with the letters "L" through "Z" are defined as integer variables, and an error-trapping subroutine is enabled. If an error occurs the program will GOTO line 750, giving the user another chance to enter the file name should a typo occur the first time around. The program also provides for the cases where no end-of-sentence is found, or if no words are found.

The program first asks for the file name, and then the line at which to start. This way if your text starts (as mine often does) with titles, names, abbreviations, etc., you can skip this material and go directly to the text. If no value is entered, the program starts at the beginning of the file.

The program then asks for the number of lines to analyze. It will check 100 lines if no number is specified. I find this number of lines to be convenient — it's about how long it takes me to get a cup of coffee. If you want to change the default value, you can change line 360 by setting the variable LN to the desired number. By the way, *don't* try to analyze a 40,000-word text — the program is a tad slow.

From this point, the program takes over. Each line is printed on the screen and analyzed. The program keeps a running count of the number of letters. At the end, this number is divided by 3 to obtain a rough count of syllables. When a space is found following a character string, it adds a word to the word count.

The program adds a sentence to the sentence count whenever it runs across a period (followed by a number of different characters), an exclamation point, or a question mark. I have also arbitrarily set things up so that an ellipsis ("..."), semicolon, colon, or a pair of dashes (en-dashes, as they're called in editorial offices) also increment the sentence count.

In calculating the fog index, three

Figure 1. An MBASIC listing of TEXTFOG.BAS, a "Reading Ease" test to produce a Fog index.

things must be taken into account:

- First, we define the range of syllables per word to be from 1.27 (easy) to 1.75 (hard).
- Second, the range of words per sentence is defined to be from 8 (easy) to 29 (hard).
- Third, the length of a sentence has about twice the influence on the index as the average number of syllables per word. This explains why the syllable factor (ASYLFAC) is multiplied by 1.8 in line 715, while the sentence factor (ASENFAC) is multiplied by 3.2.

Results

I ran the two passages at the beginning of this article through the program. George Orwell's paraphrase of the Biblical verse weighs in with an index of 7.36 when run through the program. The verse from Ecclesiastes returned a very sparse 1.90 when processed.



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John Gaudio is an electrical engineer holding two U.S. Patents on computer systems. He's been a consultant to Osborne Computer Corporation and continues to write for their magazine, the Portable Companion, Feghorn, Dog Bytes, and his own newsletter, the Survivor's Guide. Since 1981 he's been helping people get more from their Osborne Computers.

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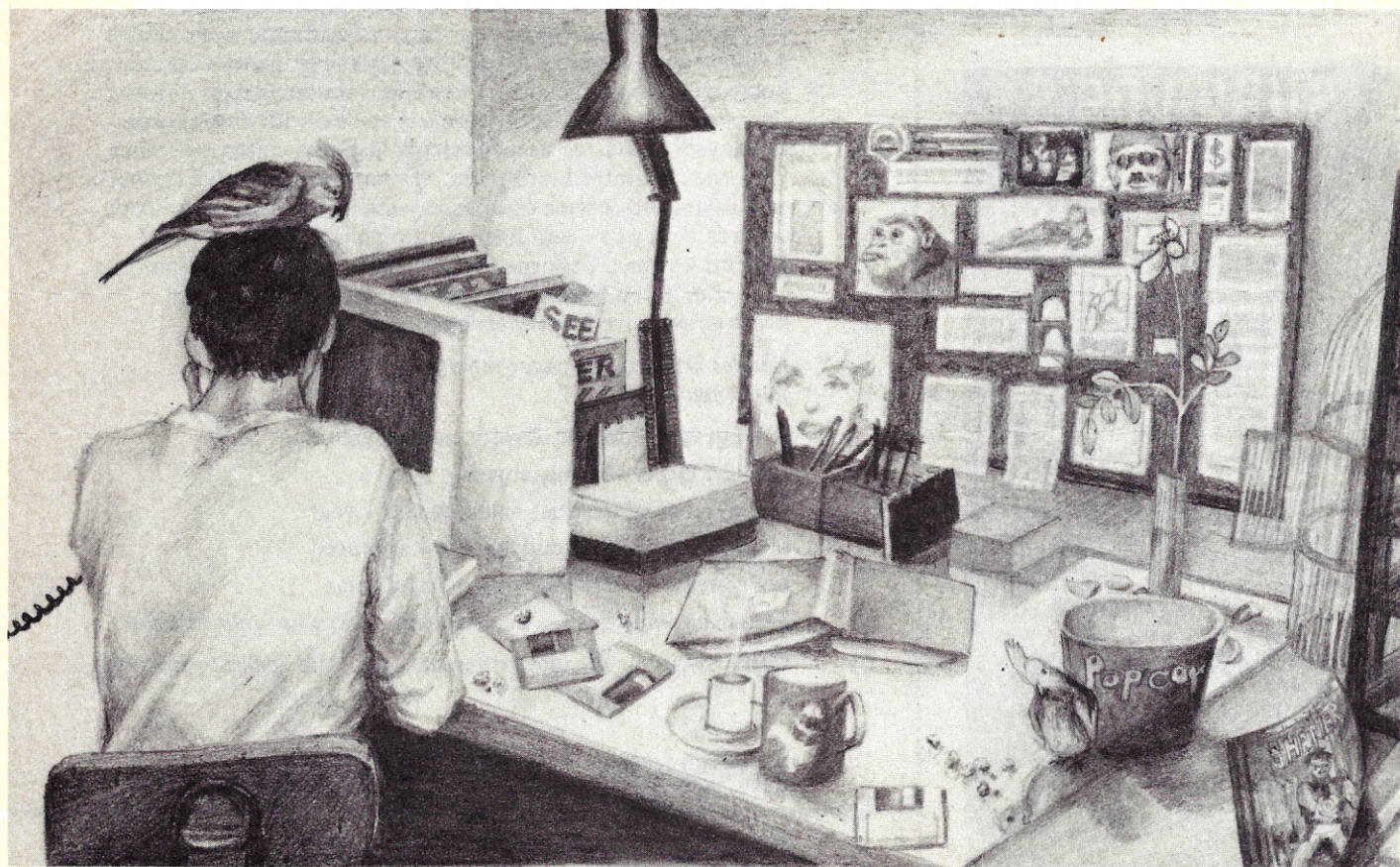
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Cleaning Disk Drives and a PIP Tip

The real dirt on cleaning your disk drives, and a technique for creating small text files using only PIP.

Louie Crew



Many manufacturers do not tell all that some of us need to know to use the various disk-cleaning kits (Disk Doctor, Floppyclene, etc.) with our Osborne computers.

I discovered the hard way. Near the end of a year in China's capital, Beijing, one of the driest and dustiest cities in the world, I was getting more and more BDOS errors. I rejoiced to arrive in Hong Kong near a supply of cleaning kits.

I promptly bought one and followed the instructions. Namely, I soaked the filter disk, inserted it, and hit a carriage return to boot. I got the anticipated **BOOT ERROR** and let the machine whirl for the required 30 seconds; then I repeated for the second drive.

When I removed the cleaning disk, I was a bit surprised to find no visible dirt on it, but considering how clever inventors are these days, I presumed they had found a fluid that not only cleaned but also made dirt disappear. After all, nowadays they even outdo the gods and make plastic dirt to go under plastic flowers, don't they!

I continued to get an abundance of BDOS errors. Finally I yielded and took it to a dealer for a complete inspection.

"It's probably just your dirty

drives," he said.

"Ah no. I cleaned those last week," I beamed.

"Well, let's check anyway," he said.

As I talked to a salesman, I heard the drives whirl needlessly behind me. "Let them have their way. It won't waste much time," I thought.

Imagine my surprise when I heard them say, "These are the dirtiest drives we have seen in months! Look!"

I stared at a cleaning disk the color of twelve months of Beijing dirt.

In fairness, my cleaning kit did say, "Engage heads for about 30 seconds." But I thought that was what I did.

The difference: The proper way to clean is to *first* boot with any CP/M disk, then replace it with the cleaning disk, then type a legitimate CP/M command (e.g., **XDIR**), then press Return. I had tried booting the cleaning disk, which did not engage the drive head properly for cleaning. The legitimate CP/M command should engage the drive head properly.

I wonder how many other people around the world periodically sit smugly before whirling machines, thinking that they are actually cleaning them, without ever engaging the cleaner!

Continued from page 23

I hasten to add: please don't take this as a cranky complaint. I read your magazine cover-to-cover the day I get it.

Tom Lewis
Albany, NY

*First, check out Brad Baldwin's "Wizard" column for the patch to speed up your WordStar. Second, you probably already know that when you first start WordStar, you can press your space bar or any key (such as **D** to select document mode) and speed up WordStar's response. Third, don't ever remove the write-protection from a disk that is protected. Copy the disk first. Why defeat the purpose of the protection? Whoops — sorry to nag.*

Lubricating Keyboards

This is a follow-up to a letter published in the Jan/Feb '85 issue of *The Portable Companion*, discussing my experiences with the article in the Nov/Dec issue of *The Portable Companion* by William Esteb on speeding up WordStar.

My initial reaction was that the modified WordStar didn't work with **NSWEEP**, but after further experimentation I find that I was in error. It works fine on the initial bootup after modification, but refuses to work after returning to CP/M and then trying to reboot WordStar. It also is potentially destructive, I lost over half a disk full of correspondence!

Was this modification thoroughly tested before publication? Was there a printer's error in the locations to be modified for version 3.3? I love the speeded up version, but if it's only good for one use before taking random shots at my data disk, forget it!

Let me throw in a little something about keyboards while I have your attention. On the advice of my dealer, I used some **WD-40** spray to lube my sticky keys and wiped out the whole keyboard! Don't do that! I bought a replacement keyboard from Witt Services, one of your advertisers. The new keyboard arrived very quickly and

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Making Short Text Files

With PIP

Alex Lane

Here's a beginner's tip, for what it's worth. If you have a need to construct a short text file (like a **SUBMIT** ".SUB" file), but you don't want to go to the hassle of rolling out WordStar, call up PIP as follows:

```
A>PIP B:MYFILE.SUB=CON: ␣
```

Once PIP is invoked, the cursor will come to rest on the next line, with no

prompt. Type in your file starting on this line, taking care to press the down-arrow (**↓**) key after pressing Return (**↵**) for each line. When you're finished, type **Control-Z**, and voila: **MYFILE.SUB** (or whatever the actual name is) is ready to go!

If you make a mistake, repeat this procedure; PIP will overwrite previous versions of the file you're trying to create.

Review

Typewriter

A program that turns your Osborne into a line-by-line memory typewriter.

Cheryl Peterson

Occasionally, even the most dedicated computer users wish they had typewriters handy for one of those quick little chores — addressing an envelope or filling out a form provided by some company or other who wants to know everything about you except your shoe size (usually because they are considering whether or not to give you money). The type of form that says “PLEASE TYPE FOR BEST RESULTS” in very fine print makes you think twice about whether your handwriting is perfectly legible. In such cases, it would be great to just shove the thing into your printer, sit down at the keyboard and fill in the blanks. But instead, you reach for your (t)rusty old

pen and start doing it by hand.

Well, MicroCost has a better solution. Their program will let you type text to your printer line by line or character by character. Typewriter supports most popular dot matrix and daisy wheel printers (listed in table 1).

Typewriter is actually a group of programs, one for each type of printer. To use the program of your choice, transfer it to a CP/M system disk. Since each printer program takes up about 28K, check to be sure you have enough room on your system disk before you copy the program (or programs) of your choice.

When you want to “type” something, you type in the name of the print-

er (“*.COM*” files are named after the printers they support). I renamed the EPSON-RX.COM program to T.COM, so I wouldn’t have so much to type in (only T↵ to execute). You can rename your version, but don’t call it TYPE (remember CP/M already has a TYPE command).

Since I have both the Epson RX-80 and the Mannesmann Tally 160-L dot matrix printers, I had a great time trying both versions of Typewriter. The Epson MX version worked fine with my RX-80. The Mannesmann Tally version worked passably well with my Mannesmann Tally 160, described in detail further on.

Using Typewriter

There are four menus that control Typewriter. The first lets you use the program to set up your printer to do some of the “other” things it can do; like boldface, underline, and alternate pitches (elongated or compressed). With some printers, you can also change the line height and turn on proportional spacing or italics print. Super-

Daisy Wheel Printers Dot Matrix Printers

Diablo
Transtar
NEC
C. Itoh
Brother HR-1

Epson
Gemini
Okidata
C. Itoh
Mannesmann Tally

Table 1. Typewriter comes in two versions, and supports the printer brands listed here.

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Typewriter with Epson RX-80 using MX-80 driver.
 Let's see if **Boldface** works.
 Now let's try underline.
 How about *italics*?
 This should be ^{superscript}.
 This should be _{subscript}.
 This is Elongated print.
Let's try that again... Elongated print.
Unexpected results.
 Turn off elongated print.
 Let's try tiny type.
 That seems fine.
 But it didn't turn off.
 Tiny type off.
 Back to normal?
 How about some combinations?
Elongated *italic Bold*.
 Tiny underline *Italic*.
Bold ^{superscript}.
 Let's go back to normal.
Bold _{subscript}.
 Interesting **Effect** there on the **Bold** _{sscripts}.
 Let's try **Elongated ^{superscript}**.
 How about **_{subscript}?**
~~Let's try that again.~~
 How about **Elongated ^{superscript} _{subscript} **Bold****.

Let's try that again.
 It seems **Bold** and underline don't work properly with
 sub- and superscripts.
 Let's try tiny *italic subscript*.

That's interesting looking... even legible.

 That's enough for now.

Figure 1. The results of using a version of Typewriter for the Epson MX-80 dot matrix printer on an Epson RX-80.

scripts and subscripts are available and you can set your right and left margin and tab length through this menu.

In typewriter mode, the program sends one character at a time out to the printer. Use control codes to change the type size or turn on any of the special functions (boldface, underline, etc.). You can set the line spacing to single, double or triple spacing. A gauge at the top of the page allows you to see how much space the different size characters will occupy, so you don't try to type too many characters per line. Because each character is sent to the printer as you type it, there is no opportunity to edit your work. What you type is what you get.

In word processing mode, you type an entire line at a time. When you hit

the Return key, the line is sent to the printer. Until you hit Return, you can edit out any mistakes using the back arrow key and overwriting the errors.

There is a graphics mode, which I could see no useful purpose for. It allows you to reset the vertical spacing and the characters per inch and then move the print head around the page using the arrow keys. Wherever the print head stops a dot is printed. This should make it possible to do graphics with your printer. To me, it seemed entirely too much trouble to go to.

The typewriter and word processing options were most useful. Since I don't have a daisy wheel printer, my observa-

tions are limited to the dot matrix versions.

Comparing Printers

First, I tried several of the versions with my RX-80. The MX-80 version seemed to work just fine (see figure 1). Most functions worked, but in typewriter mode, the carriage can't really keep up with a fast typist. The word processing mode is better suited to most tasks, anyway. Not too many of us are perfect typists but word processors should give perfect results the first time we print with no corrections to the paper needed.

10Typewriter with Epson RX-80 using FX-80 driver.
 Let's see if **Boldface works.**
 Let's try underline.
 How about _{subscript.}

How about ^{superscript.}

Oops, I got them reversed again. ^{superscript} _{subscript.}

This is **elongated print.**

Now for the fancy stuff.

Tiny **elongated italic.**

Tiny *italic.*

underline tiny and italic all together.

Back to normal?

Back to normal?

How about a **bold superscript?**

How about a **bold subscript?**

underline subscript!

underline superscript.

10bold off, italic **elongated underlined subscript**

The 10 at the front of the line only happens
 when you leave the word processing mode and then come back.

Figure 2. The results of using a version of Typewriter for the Epson FX-80 dot matrix printer on an Epson RX-80.

The only problems I experienced came when I tried to do fancy subscripts or superscripts (which I don't need to use often). Underlining and Boldfacing seemed to upset the way they work (see figure 1 for an example).

An interesting feature I discovered by accident is that tiny and elongated commands used together give a size somewhere in the middle (not 12 or 10 pitch.) It was a nice looking effect (see figure 2, line 9.)

Figure 2 was made using the RX-80 printer with the FX-80 version of Typewriter. It seemed to work fine, except for the (10) that was inserted at the beginning of the first line upon entering the word processing mode. I also noticed that in this mode underlining or bold and the subscripts and superscripts worked fine together. It was an interesting experiment.

When I switched over to the Mannesmann Tally things were a bit different. Some of the commands worked as expected; subscripts and super-

scripts, bold and underline, and tiny type. The MT has no italics, so that command wouldn't work. In addition, the elongated command failed. The problems encountered with subscripts and superscripts in combination with bold and underline were also present.

In the FX version the mysterious (10) also showed up and the boldface command turned on the Mannesmann's correspondence quality mode.

There was one additional problem, caused by a peculiarity of the MT. I normally use my MT with NewWord or WordStar and the automatic line feed function off. At the end of the line, the carriage waited for the next line to come and then overprinted the same line. This was no great problem, since adding an extra return added a line to get the proper line spacing. Or you could turn on the Mannesmann's auto-line feed function.

Although the documentation I received with the programs was inaccurate, the correct commands are listed

on the screen in front of you when you use the program. As you type, the help menu scrolls off the top of the screen. Switch to another mode and then switch back again if you need to get the help menu back. This will cause you to lose the information on the screen, but for the kinds of things this would be used for it mostly doesn't matter.

Use Typewriter to type a copy of the help menu when you first use the program, so you have a paper copy of the help menu to refer to, and you can get acquainted with using the program.

All in all, this is not a fancy program; just efficient. It is meant to perform only a few functions, but if you need them it's well worth the \$25.

Typewriter

Daisy Wheel Version — \$25

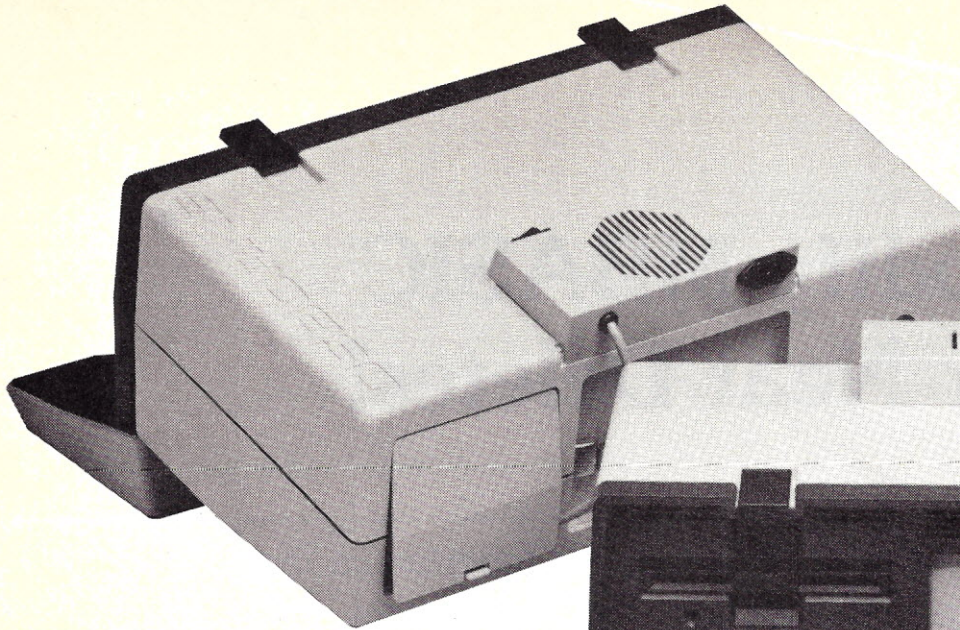
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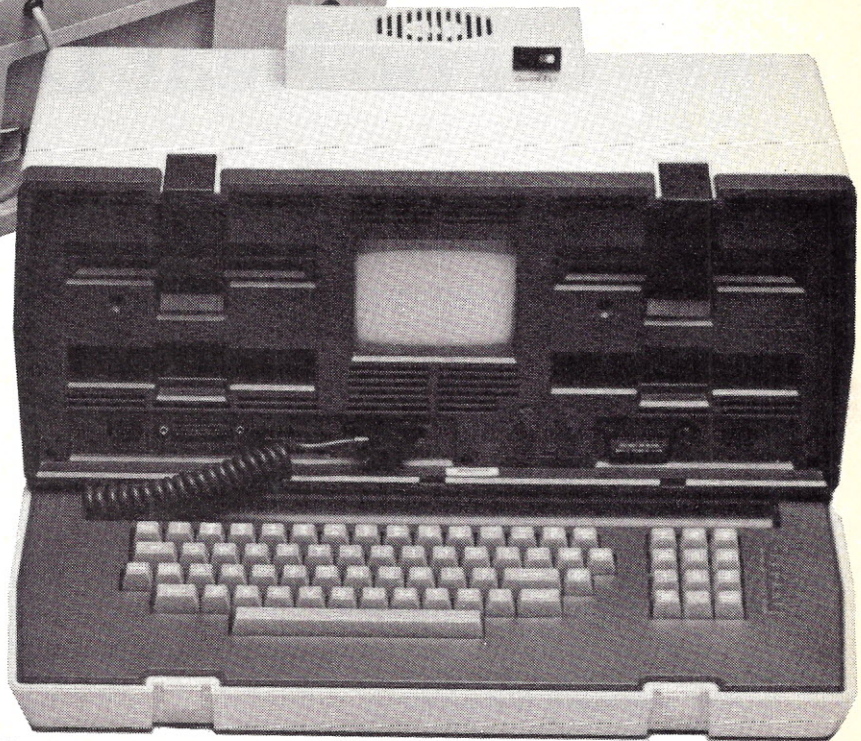


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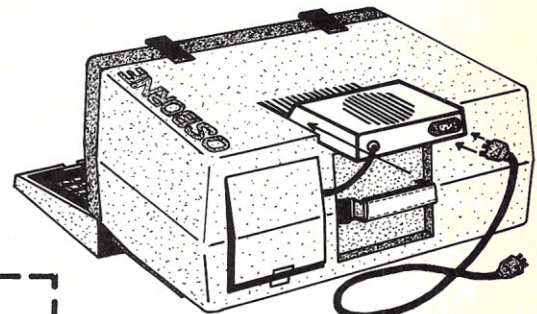
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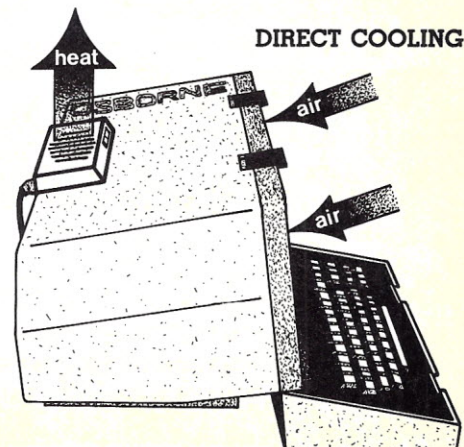


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Modify MBASIC For Neat Deletes!

Change the MBASIC EDIT delete function so that deletions occur without the backslashes.

John W. Roberts

Backslashes are used to identify the characters deleted when editing a line of an MBASIC program. These extra characters make it difficult to keep track of what to edit next. Editing even a short line can be annoying:

```
Ok
100 PRINT "Programmmming is always fun" ↵
      (To edit:)
EDIT 100 ↵
      (Now type spaces to display line:)
100 PRINT "Programm
      (Now you type D to delete the m:)
100 PRINT "Programm\m\
```

When you delete the extra "m" in "Programm~~mm~~ing", \m\ appears and the line being edited no longer agrees with the line above. As the deletions continue, the display becomes more confused:

```
100 PRINT "Programm\m\ing is \a\\l\\w\\a\\y\\s\ fun"
```

Editing can be easier. Try this: after loading MBASIC, make these two POKEs:

```
Ok
POKE 15861,8: POKE 15841,127 ↵
```

Now see how much easier it is to delete unwanted characters. (These POKEs work on MBASIC 5.21, dated 29 May 1981 which came with my Osborne 1.)

Each time you press D, the deleted character is replaced by a "blob" and followed by the deleted character. In this example, the "blob" is indicated by an asterisk:

```
100 PRINT "Programming is always fun"
100 PRINT "Programm*ing is *****s
With the cursor under the "s" of "always", *s appears when you press D. The "blobs" show exactly what has been deleted so far, and the s over the cursor indicates the last character deleted. Pressing the space bar will cause the correct characters to appear as the cursor moves to the right:
```

```
100 PRINT "Programm*ing is ***** fun"
```

The edited line may be checked before pressing Return. Of course, the result is:

```
100 PRINT "Programming is fun"
```

With this modification editing long lines of code becomes easy. Try it. Then try some of the other POKEs shown in this table:

MBASIC POKES (decimal values)

Modification	Address	From	To	
Delete	15841	92 \	127	blob
Delete	15861	92 \	8	bksp
E same as ↵	15737	203	200	
Space to →	15693	240	220	
D to ↓	15725	20	186	
I to ↑	15720	25	187	
~ as edit flag	15614	32	126	

According to the book, the E command is supposed to work

the same as Return (↵). However, when you press E, the editing is ended and the remainder of the line being edited does not appear on the screen. You POKE 200 at address 15737 to make the E command operate the same as Return.

The next three POKES make the arrow keys in MBASIC operate in a manner similar to the arrow keys in SuperCalc. I am now accustomed to using the space bar, D and I keys when editing. Having to move my fingers to the arrow keys slows me down.

The last POKE merely puts a tilde, ~, between the line number and the first character of the line to indicate the system is in the edit mode:

```
100~PRINT "Programming is fun"
```

Use the following short program to test all of the changes. Lines 40 through 70 of the MODIFY MBASIC LINE EDITOR subroutine are organized to make it easy to eliminate those which don't interest you. This is done by merely deleting or turning the line into a REM statement.

```
10 GOTO 90
20 'MODIFY MBASIC LINE EDITOR
30 IF PEEK(15841)=127 OR PEEK(15841)=92 THEN 40:ELSE
  PRINT"CANNOT MODIFY THE LINE EDITOR":RETURN
40 POKE 15841,127:POKE 15861,8:REM Delete Modification
50 POKE 15737,200:REM Make E same as Return key
60 POKE 15693,220:POKE 15725,186:POKE 15720,187:REM arrow keys
70 POKE 15614,126:REM ~ as an editing flag
80 RETURN
90 GOSUB 30
100 PRINT"Programing is always fun"
```

These changes apply to MBASIC 5.21 and have been tested on the Osborne 1 single and double density systems (OCC and Nuevo Electronics Corp. upgrades) as well as the Osborne Executive. Since the changes involve modifying the MBASIC interpreter, they do not depend on the ROM (Read Only Memory) installed.

Once MBASIC is loaded and the MODIFY MBASIC LINE EDITOR subroutine has been executed, the changes will remain in effect until MBASIC is loaded again. A program similar to the test program can be used to make these changes before starting to create a new program, or you may include this subroutine in the program you are creating.

Line 30 of the subroutine performs a simple check to determine if the changes apply to the version of MBASIC used to run the program which contains the subroutine. This is important if software containing this subroutine is transported to a different machine. For example, these changes do not apply to a Kaypro, and MBASIC operating on MS-DOS systems uses an entirely different editor. Since the line editor modification is a debugging tool, the subroutine (and the call to it) should be removed before transporting the software.

Any of these changes may be made permanent by using DDT to change (a copy of) MBASIC. The POKE addresses and values poked are the same but they are entered as hexadecimal numbers. Here are the hexadecimal values:

MBASIC POKES (hexadecimal values)

Modification	Address	From	To
Delete	3DE1	5C	7F
Delete	3DF5	5C	08
E same as ↵	3D79	CB	C8
Space to →	3D4D	F0	DC
D to ↓	3D6D	14	BA
I to ↑	3D68	19	BB
~ as edit flag	3CFE	20	7E

The sequence for using DDT to make all of these changes, saving a copy of the modified MBASIC interpreter (under the name B:TEST.COM) and loading B:TEST to check the results is detailed below:

```
A>DDT A:MBASIC.COM ↵
DDT VERS 2.2
NEXT PC
6000 0100
-S3DE1 ↵
3DE1 5C 7F ↵ (delete modification)
3DE2 CD . ↵
-SEDF5 ↵
3DF5 5C 08 ↵ (delete modification)
3DF6 CD . ↵
-S3D79 ↵
3D79 CB C8 ↵ (make E same as ↵)
3D7A 3E . ↵
-S3D4D ↵
3D4D F0 DC ↵ (change space to →)
3D4E CA . ↵
-S3D6D ↵
3D6D 14 BA ↵ (change D to ↓)
3D6E CA . ↵
-S3D68 ↵
3D68 19 BB ↵ (change I to ↑)
3D69 CA . ↵
-S3CFE ↵
3CFE 20 7E ↵ (change space to ~)
3CFF CD . ↵
-^C

A>SAVE 96 B:TEST.COM ↵
A>B:TEST ↵ (loads the modified MBASIC)
.
.
.
OK
```

To make these modifications to MBASIC on another CP/M-based system (such as a Kaypro), use DDT to obtain an assembly language listing of the area in the Osborne MBASIC interpreter where the changes are made. (In DDT use the command L3CFD,3D9F ↵) Find the area in the other version of MBASIC where the code is very similar, make some changes and see what happens! A simple FOR loop set up to print all occurrences of the backslash should narrow down your search.

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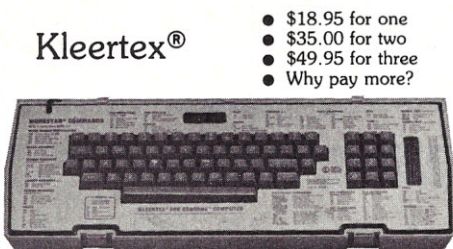
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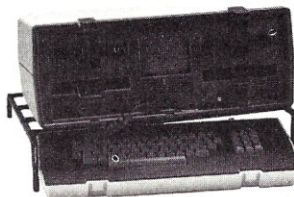
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Word Funny

An alternative to shoot-em-up games, Word Funny is an MBASIC word-stimulus program that develops language skills.

Dennis Stovall

Computer games are irritating to me. PacMan and Space Invaders are too mindless, with little or no learning value. I feel this way probably because I'm a teacher. One of my first experiences using an Apple // Plus in the classroom was a "beep-beep" interruption of my teaching. I went to see what my students were doing — they were shooting deer running across the screen!

Word Funny is a word-stimulus game written to interest young people in computers and to develop language skills. The game plays with parts of speech, plurals, verb tenses, other inflections, and language stimulations. Most important, it brings kids out from under the "videogame" umbrella and into learning, *ala* Osborne!

Word Funny was written jointly by my son, Dale (age 10) and me (an elementary school teacher with the Anchorage School District).

Written in MBASIC, the game asks for special words by parts of speech, then it takes the words as string statements and recreates them into three nursery rhymes and an Aesop fable.

Graphic pictures are presented between each part of the game, and at the end.

Actual game playing begins on line 780 and ends on line 2890. There are 5 graphic pictures POKEd out by Dale. Except for the Opening Screen, the four graphics screens were written separately, then MERGED into the program at the end

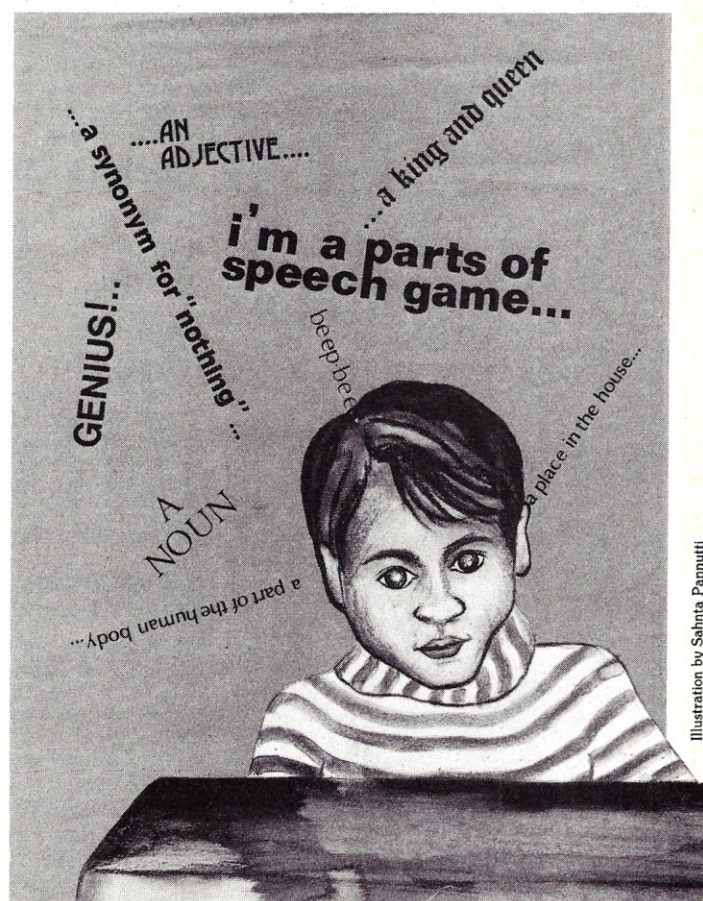


Illustration by Sahinta Pannutti

and are used as GOSUBs:

10-760	Opening Screen
2940-6620	Moving Graphics (Screen 1)
6630-9210	Moving Graphics (Screen 2)
9220-10260	Moving Graphics (Screen 3)
10270-11230	Closing Screen

The user's name throughout the game is used as A\$ through the game's four parts:

970-1180
1270-1500
1700-1940
2120-2660

Based on 'Humpty Dumpty'
Based on 'Old Mother Hubbard'
Based on 'Little Jack Horner'
Based on 'The Hare & The Tortoise'

It should be fairly easy to add parts to the game, or change the game, by looking at these lines.

Word Funny has been kid-tested in my own classroom. I've found it to be both academically rewarding and entertaining for my students.

□

Word Funny Listing

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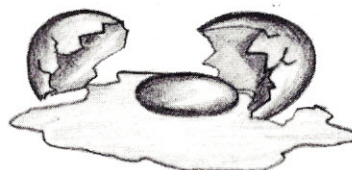
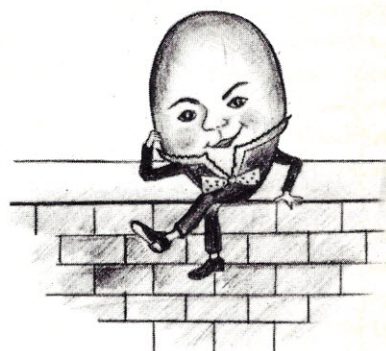
10 PRINT CHR$(26)
20 FOR A=61442! TO 61491! STEP +1
30 POKE A,0
40 NEXT A
50 FOR A=64258! TO 64307! STEP +1
60 POKE A,0
70 NEXT A
72 POKE 61571!,0
74 POKE 64131!,0
76 POKE 61618!,0
78 POKE 64178!,0
80 POKE 62226!,87
90 POKE 62227!,79
100 POKE 62228!,82
110 POKE 62229!,68
120 POKE 62231!,70
130 POKE 62232!,85
140 POKE 62233!,78
150 POKE 62234!,78
160 POKE 62235!,89
170 POKE 62482!,66
180 POKE 62483!,89
190 POKE 62485!,68
200 POKE 62486!,101
210 POKE 62487!,110
220 POKE 62488!,110
230 POKE 62489!,105
240 POKE 62490!,115
250 POKE 62492!,65
260 POKE 62493!,110
270 POKE 62494!,100
280 POKE 62496!,68
290 POKE 62497!,97
300 POKE 62498!,108
310 POKE 62499!,101
320 POKE 62501!,83
330 POKE 62502!,116
340 POKE 62503!,111
350 POKE 62504!,118
360 POKE 62505!,97
370 POKE 62506!,108
380 POKE 62507!,108

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390 POKE 62738!,67
400 POKE 62739!,111
410 POKE 62740!,112
420 POKE 62741!,121
430 POKE 62742!,114
440 POKE 62743!,105
450 POKE 62744!,103
460 POKE 62745!,104
470 POKE 62746!,116
480 POKE 62748!,40
490 POKE 62749!,99
500 POKE 62750!,41
510 POKE 62752!,49
520 POKE 62753!,57
530 POKE 62754!,56
540 POKE 62755!,52
550 POKE 62994!,65
560 POKE 62995!,110
570 POKE 62996!,99
580 POKE 62997!,104
590 POKE 62998!,111
600 POKE 62999!,114
610 POKE 63000!,97
620 POKE 63001!,103
630 POKE 63002!,101
640 POKE 63003!,44
650 POKE 63004!,65
660 POKE 63005!,75
670 FOR A=61442! TO 64258! STEP +128
680 POKE A,0
690 NEXT A
700 FOR A=61491! TO 64307! STEP +128
710 POKE A,0
720 NEXT A
730 GOSUB 9000:PRINT CHR$(26)
2000 PRINT CHR$(26):PRINT "HELLO.":PRINT:PRINT:PRINT:GOSUB 7000
2010 PRINT "WHAT'S YOUR NAME?":INPUT A$:PRINT CHR$(26):PRINT:PRINT:PRINT
2020 PRINT:PRINT "HELLO, ";A$;".":GOSUB 7000:PRINT CHR$(26)
2030 PRINT "I'M A PARTS OF SPEECH GAME!":PRINT:PRINT:PRINT:PRINT:GOSUB 7000
2040 PRINT A$;", WE'LL ASK YOU FOR SPECIAL WORDS OR ":GOSUB 7000:PRINT
2050 PRINT "PARTS OF SPEECH, AND WE'LL CREATE FUNNY STORIES":GOSUB 7000:PRINT
2060 PRINT "WITH YOUR WORDS!!!":GOSUB 7000:PRINT:PRINT:PRINT:PRINT

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Word Funny Listing continued

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2070 PRINT "THERE'LL BE SOME SURPRISES TOO!":GOSUB 8000:PRINT:PRINT
2080 PRINT "PRESS 'RETURN' TO CONTINUE":INPUT B$:PRINT CHR$(26)
2090 PRINT "IT'LL BE EASY . . . AND FUN!":GOSUB 7000:PRINT:PRINT
2100 PRINT "JUST FOLLOW THE DIRECTIONS AS WE GO ALONG!":GOSUB 8000:PRINT
2110 PRINT:PRINT:PRINT:PRINT "READY TO GO?":GOSUB 7000:PRINT:PRINT:PRINT
2120 PRINT "ANSWER YES OR NO":INPUT B$:PRINT CHR$(26)
2130 IF B$="YES" GOTO 2500
2140 IF B$="NO" THEN GOTO 2190:ELSE GOTO 2120
2190 PRINT A$;"! I JUST DON'T UNDERSTAND!!!":GOSUB 8000:PRINT:PRINT:PRINT
2200 PRINT "YOU MUST NOT BE PAYING ATTENTION!":GOSUB 7000:PRINT:PRINT:PRINT
2210 PRINT "PLEASE TRY HARDER THIS TIME!":GOSUB 8000:PRINT CHR$(26):GOTO 2000
2220 LIST
2500 PRINT A$;"", GIVE ME THE NAME OF SOMEONE YOU":PRINT " KNOW (PROPER NOUN)":INPUT B$:PRINT CHR$(26)
2510 PRINT "GIVE ME A WORD THAT RHYMES WITH THAT NAME":PRINT "MAKE IT UP IF YOU HAVE TO":INPUT C$:PRINT CHR$(26)
2520 PRINT "GOOD, ";A$;"":GOSUB 8000:PRINT CHR$(26)
2530 PRINT "NOW I NEED A COMMON NOUN FOR A PLACE.":INPUT D$:PRINT CHR$(26)
2540 PRINT "GIVE ME ONE WORD FOR SOMETHING THAT CAN HURT":PRINT "YOU OR HAPPEN TO YOU.":INPUT E$:PRINT CHR$(26)
2550 PRINT "GREAT! NOW I NEED THE 'TITLE' OF SOMEONE.":PRINT "IMPORTANT (E.G. A KING OR QUEEN)":INPUT G$:PRINT CHR$(26)
2560 PRINT "IT ISN'T TOO HARD, IS IT.":GOSUB 8000:PRINT CHR$(26)
2570 PRINT "GIVE ME AN ANIMAL, PLURAL.":INPUT F$:PRINT CHR$(26)
2580 PRINT "THAT'S IT, ";A$;"!":GOSUB 8000:PRINT CHR$(26)
2590 PRINT "I'LL BET YOU'RE CURIOUS...":GOSUB 8000:PRINT CHR$(26)
2600 PRINT "HERE COMES YOUR FIRST 'WORD FUNNY'":GOSUB 8000:PRINT CHR$(26)
2610 PRINT " YOUR 'WORD FUNNY' IS BASED ON":GOSUB 7000:PRINT
2620 PRINT " THE NURSERY RHYME":GOSUB 7000:PRINT
2630 PRINT " HUMPTY DUMPTY!":GOSUB 8000:PRINT CHR$(26)
2740 PRINT " ";B$;"-TY ";C$;"-TY":PRINT:PRINT:GOSUB 8000:
2750 PRINT B$;"-TY ";C$;"-TY SAT ON A ";D$;"":GOSUB 7000:PRINT
2760 PRINT B$;"-TY ";C$;"-TY HAD A GREAT ";E$;"!":GOSUB 7000:PRINT
2770 PRINT "ALL THE ";G$;"'S ";F$;"":GOSUB 7000:PRINT
2780 PRINT "AND ALL THE ";G$;"'S MEN ":GOSUB 7000:PRINT
2790 PRINT "COULDN'T PUT ";B$;"-TY ";C$;"-TY":GOSUB 7000:PRINT
2800 PRINT "TOGETHER AGAIN!":GOSUB 9000:PRINT:PRINT:PRINT:PRINT"PRESS 'RETURN' TO CONTINUE":INPUT Z$:PRINT CHR$(26)
2810 GOSUB 10000:PRINT CHR$(26):PRINT "HA! HA! HA!":GOSUB 8000:PRINT:PRINT
2820 PRINT "TERRIFIC 'WORD FUNNY' ";A$;"!":GOSUB 8000:PRINT CHR$(26)
2830 PRINT "NOW, ";A$;"", YOU HAVE 3 OPTIONS TO CONTINUE...":GOSUB 7000:PRINT:PRINT
2840 PRINT " A - DO THE RHYME AGAIN, BUT WITH NEW WORDS":GOSUB 7000:PRINT
2850 PRINT " B - SEE IT AGAIN WITH THE SAME WORDS":GOSUB 7000:PRINT
2860 PRINT " C - GO ON TO NEXT 'WORD FUNNY'":GOSUB 7000:PRINT:PRINT:PRINT:PRINT:PRINT"ANSWER A, B OR C":INPUT X$:PRINT CHR$(26)
2870 IF X$="A" THEN GOTO 2500
2880 IF X$="B" THEN GOTO 2740
2890 IF X$="C" THEN GOTO 3000:ELSE GOTO 2830
3000 PRINT "GIVE ME THE FIRST (OR LAST) NAME OF SOMEONE.":INPUT B$:PRINT CHR$(26)
3010 PRINT "GIVE ME THE NAME OF A PLACE WHERE THINGS ARE STORED.":INPUT C$:PRINT CHR$(26)
3020 PRINT "GEE, THIS IS FUN!!!":GOSUB 7000:PRINT CHR$(26)
3030 PRINT "GIVE ME AN ADJECTIVE.":INPUT H$:PRINT CHR$(26)
3040 PRINT "NOW, ";A$;" I NEED A NOUN FOR AN ANIMAL.":INPUT D$:PRINT CHR$(26)
3050 PRINT "STATE SOMETHING EDIBLE.":INPUT E$:PRINT CHR$(26)
3060 PRINT A$;"", I NEED ANOTHER ADJECTIVE.":INPUT F$:PRINT CHR$(26)
3070 PRINT "AND I NEED A SYNONYM FOR 'NOTHING'.":INPUT G$:PRINT CHR$(26)
3080 PRINT "GREAT JOB, ";A$;"...":GOSUB 7000:PRINT:PRINT:PRINT:PRINT
3090 PRINT "I REALLY LIKED YOUR ";F$;" ANSWER!":GOSUB 8000:PRINT CHR$(26)
3100 PRINT "HERE IT COMES...":GOSUB 8000:PRINT CHR$(26)
3110 PRINT " YOUR 'WORD FUNNY'":GOSUB 7000:PRINT
3120 PRINT " IS BASED ON":GOSUB 7000:PRINT

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Word Funny Listing continued

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3130 PRINT "      OLD MOTHER HUBBARD!":GOSUB 8000:PRINT CHR$(26)
3140 PRINT "OLD MOTHER ";B$;"!":GOSUB 8000:PRINT:PRINT
3150 PRINT "OLD MOTHER ";B$:GOSUB 7000:PRINT
3160 PRINT "WENT TO THE ";C$:GOSUB 7000:PRINT
3170 PRINT "TO GET THE ";H$;" ";D$:GOSUB 7000:PRINT
3180 PRINT "A ";E$;" ":GOSUB 8000:PRINT:PRINT
3190 PRINT "AND WHEN ";B$;" GOT THERE":GOSUB 7000:PRINT
3200 PRINT "THE ";C$;" WAS ";F$:GOSUB 7000:PRINT
3210 PRINT "AND SO THE ";H$;" ";D$:GOSUB 7000:PRINT
3220 PRINT "GOT ";G$;"!":GOSUB 9000:PRINT:PRINT:PRINT:PRINT
3230 PRINT "PRESS 'RETURN' TO CONTINUE":INPUT Z$:PRINT CHR$(26)
3240 PRINT "I REALLY LIKED THAT, ";A$;"!":GOSUB 7000:PRINT:PRINT
3315 PRINT CHR$(26):PRINT "WHAT'D YOU THINK ABOUT IT?":GOSUB 7000:PRINT:PRINT
3319 PRINT "  A - IT WAS FANTASTIC!!!":GOSUB 7000:PRINT
3321 PRINT "  B - IT WAS BORING. 'ZZZZZ...":GOSUB 7000:PRINT
3322 PRINT "  C - (There is no 'c' answer. Ha!)":GOSUB 7000:PRINT:PRINT:PRINT:PRINT:PRINT"ANSWER A OR B":INPUT X$
3329 IF X$="A" THEN GOTO 3334
3330 IF X$="B" THEN GOTO 3332:ELSE GOTO 3315
3332 GOSUB 21000:GOTO 3336
3334 GOSUB 17000:GOTO 3336
3336 PRINT CHR$(26):PRINT"FUNNY, HUH! (DON'T ANSWER)":GOSUB 8000:PRINT CHR$(26)
3339 PRINT CHR$(26):PRINT "WELL, ";A$;" ", NOW YOU HAVE 4 OPTIONS":GOSUB 7000:PRINT:PRINT
3343 PRINT "  A - START OVER WITH THE FIRST 'WORD FUNNY':GOSUB 7000:PRINT
3347 PRINT "  B - REDO THIS 'WORD FUNNY' WITH NEW WORDS":GOSUB 7000:PRINT
3350 PRINT "  C - SEE THE LAST 'WORD FUNNY' AGAIN, UNCHANGED":GOSUB 7000:PRINT
3354 PRINT "  D - GO ON TO NEXT 'WORD FUNNY':GOSUB 7000:PRINT:PRINT:PRINT:PRINT "ANSWER A, B, C OR D":INPUT X$:PRINT CHR$(26)
3360 IF X$="A" GOTO 2500
3370 IF X$="B" GOTO 3000
3380 IF X$="C" GOTO 3140
3390 IF X$="D" GOTO 3500:ELSE GOTO 3339
3500 PRINT CHR$(26):PRINT "I NEED AN ADJECTIVE, ";A$;" ":INPUT B$:PRINT CHR$(26)
3510 PRINT "GIVE ME THE FIRST NAME OF SOMEONE YOU KNOW.":INPUT C$:PRINT CHR$(26)
3520 PRINT "NOW I NEED A PAST TENSE VERB.":INPUT D$:PRINT CHR$(26)
3530 PRINT A$;" ", YOU'RE GETTING GOOD AT THIS NOW!":GOSUB 7000:PRINT CHR$(26)
3540 PRINT "GIVE ME THE NAME OF A PLACE IN A HOUSE.":INPUT E$:PRINT CHR$(26)
3550 PRINT "NAME A WELL-KNOWN HOLIDAY.":INPUT F$:PRINT CHR$(26)
3560 PRINT "NOW, ";A$;" ", STATE A PART OF THE HUMAN BODY.":INPUT G$:PRINT CHR$(26)
3590 PRINT "GIVE ME THE NAME OF A FRUIT OR VEGETABLE":PRINT"NORMALLY EATEN IN THE SUMMER.":INPUT H$:PRINT CHR$(26)
3610 PRINT "I NEED AN UNUSUAL ADJECTIVE.":INPUT I$:PRINT CHR$(26)
3620 PRINT "GIVE ME A 'SLANG' TERM FOR SOMEONE":PRINT"(E.G. JERK, NERD, ETC)":INPUT J$:PRINT CHR$(26)
3630 PRINT "WOW, ";A$;"!! THAT WAS GREAT!":GOSUB 8000:PRINT CHR$(26)
3650 PRINT A$;" ", YOU'RE REALLY GETTING CREATIVE!":GOSUB 8000:PRINT CHR$(26)
3670 PRINT "THAT'S A SIGN OF GENIUS, YOU KNOW!":GOSUB 8000:PRINT CHR$(26)
3680 PRINT "I KNOW YOU'RE GETTING ANXIOUS":GOSUB 8000:PRINT:PRINT
3690 PRINT "SO HERE'S YOUR NEXT 'WORD FUNNY'":GOSUB 8000:PRINT CHR$(26)
3710 PRINT "THIS 'WORD FUNNY' IS BASED ON":GOSUB 7000:PRINT
3720 PRINT "  LITTLE JACK HORNER.":GOSUB 8000:PRINT CHR$(26)
3730 PRINT B$;" ";C$;" HORNER":GOSUB 8000:PRINT:PRINT
3740 PRINT B$;" ";C$;" HORNER":GOSUB 7000:PRINT
3750 PRINT D$;" IN A ";E$:GOSUB 7000:PRINT
3760 PRINT "EATING HIS ";F$;" PIE.":GOSUB 7000:PRINT
3770 PRINT "HE STUCK IN HIS ";G$:GOSUB 7000:PRINT
3780 PRINT "AND PULLED OUT A ";H$:GOSUB 7000:PRINT
3790 PRINT "AND SAID, 'WHAT A ":GOSUB 7000:PRINT
3800 PRINT I$;" ";J$;" AM I!":GOSUB 9000:PRINT:PRINT:PRINT:PRINT"PRESS 'RETURN' TO CONTINUE.":INPUT B$:PRINT CHR$(26)

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Word Funny Listing continued

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3810 PRINT A$;"! THAT WAS MARVELOUS!!!":GOSUB 8000:PRINT CHR$(26)
3820 PRINT "AND THERE'S STILL MORE!!!":GOSUB 8000:PRINT CHR$(26)
3830 GOSUB 17000:PRINT CHR$(26)
3850 PRINT "NOW ";A$;"", ON TO OUR NEXT 'WORD FUNNY'.":GOSUB 8000:PRINT CHR$(26)
3860 PRINT "OOPS! I FORGOT!":GOSUB 7000:PRINT:PRINT:PRINT
3870 PRINT "FIRST YOU NEED YOUR CHOICES...":GOSUB 7000:PRINT
3880 PRINT "  A - START OVER FROM THE BEGINNING":GOSUB 7000:PRINT
3890 PRINT "  B - DO LAST ONE OVER WITH NEW WORDS":GOSUB 7000:PRINT
3900 PRINT "  C - GO ON TO NEXT 'WORD FUNNY'":GOSUB 7000:PRINT
3910 PRINT "  D - THE PROGRAM IS LOUSY! I QUIT!":GOSUB 7000:PRINT:PRINT:PRINT:PRINT
3920 PRINT "ANSWER A, B, C OR D":INPUT X$:PRINT CHR$(26)
3930 IF X$="A" GOTO 2500
3931 IF X$="B" THEN GOTO 3500
3932 IF X$="C" THEN GOTO 4000
3933 IF X$="D" THEN GOTO 3940:ELSE GOTO 3880
3940 GOSUB 21000:PRINT CHR$(26):PRINT "BYE, ";A$;".":GOSUB 9000:END
4000 PRINT CHR$(26)
4010 PRINT "GIVE ME THE NAME OF SOMEONE YOU KNOW":INPUT B$:PRINT CHR$(26)
4020 PRINT "GIVE ME THE NAME OF SOMEONE ELSE":INPUT C$:PRINT CHR$(26)
4030 PRINT "I NEED A POSITIVE ADJECTIVE":INPUT D$:PRINT CHR$(26)
4040 PRINT "I NEED ANOTHER POSITIVE ADJECTIVE":INPUT E$:PRINT CHR$(26)
4050 PRINT "NOW I NEED A 'NEGATIVE' ADJECTIVE":INPUT F$:PRINT CHR$(26)
4060 PRINT "I NEED ANOTHER 'NEGATIVE' ADJECTIVE":INPUT G$:PRINT CHR$(26)
4070 PRINT "NAME SOMETHING YOU WANT TO DO SOMEDAY":INPUT M$:PRINT CHR$(26)
4080 PRINT "STATE AN INTERJECTION":FOR K=1 TO 1000:NEXT K:PRINT:PRINT
4090 PRINT "(THAT IS A ONE WORD STATEMENT, E.G. NOW! YES!)"
4100 INPUT H$:PRINT CHR$(26)
4110 PRINT "GIVE ME THE NAME OF ANOTHER PERSON":INPUT I$:PRINT CHR$(26)
4120 PRINT "NOW I NEED ANOTHER INTERJECTION":INPUT J$:PRINT CHR$(26)
4130 PRINT "  TIRED YET?":FOR K=1 TO 1000:NEXT K:PRINT:PRINT
4140 PRINT "  THIS WILL BE THE BEST 'WORD FUNNY'":FOR K=1 TO 1000:NEXT K
4150 PRINT:PRINT:PRINT "    SO IT'S WORTH IT!!!":FOR K=1 TO 1000:NEXT K:PRINT:PRINT
4160 PRINT ".....I HOPE!":FOR K=1 TO 3000:NEXT K:PRINT CHR$(26)
4170 PRINT "ONE MORE INTERJECTION, PLEASE ";A$;"!":INPUT K$:PRINT CHR$(26)
4180 PRINT "NAME SOMETHING YOU DO WHEN YOU'RE ALL ALONE":INPUT L$:PRINT CHR$(26)
4190 PRINT "LAST WORD...":FOR K=1 TO 1000:NEXT K:PRINT:PRINT
4200 PRINT "A PAST TENSE VERB":INPUT N$:PRINT CHR$(26)
4210 PRINT "EXCELLENT, ";A$;"!":FOR K=1 TO 2500:NEXT K:PRINT CHR$(26)
4220 PRINT "  I'M WORRIED...":FOR K=1 TO 1500:NEXT K:PRINT:PRINT
4230 PRINT "  I HOPE THIS ONE WORKS...":FOR K=1 TO 1500:NEXT K:PRINT:PRINT
4240 PRINT "  THIS IS REALLY DIFFICULT!!!":FOR K=1 TO 1500:NEXT K:PRINT CHR$(26)
4250 PRINT "NOW GIVE ME A SECOND OR TWO TO PUT IT TOGETHER.":FOR K=1 TO 2500:NEXT K
4260 PRINT CHR$(26):FOR K=1 TO 3000:NEXT K
4270 PRINT "THIS 'WORD FUNNY' IS BASED ON":FOR K=1 TO 1500:NEXT K:PRINT:PRINT
4280 PRINT "  THE AESOP FABLE":FOR K=1 TO 1500:NEXT K:PRINT:PRINT
4290 PRINT "  THE HARE AND THE TORTOISE":FOR K=1 TO 3500:NEXT K:PRINT CHR$(26)
4300 PRINT B$;" AND ";C$:FOR K=1 TO 2500:NEXT K:PRINT:PRINT
4310 PRINT B$;" ALWAYS BRAGGED HOW ";D$:GOSUB 7000:PRINT
4330 PRINT "AND ";E$;" HE WAS, AND ";GOSUB 7000:PRINT
4350 PRINT B$;" ENJOYED TEASING ";C$:GOSUB 7000:PRINT
4370 PRINT "FOR BEING SO ";F$;" AND ";G$;".":GOSUB 7000:PRINT
4390 PRINT "'YOU CHALLENGE ME TO RACE TO ";M$;"?":GOSUB 7000:PRINT
4410 PRINT "SAID ";B$;"", ADDING, "'";H$;"!":GOSUB 7000:PRINT
4430 PRINT "'ENOUGH ";H$;"", SAID ";C$;"", 'LET":GOSUB 7000:PRINT
4440 PRINT "THE RACE TO ";M$;" BEGIN!":GOSUB 9000:PRINT CHR$(26)

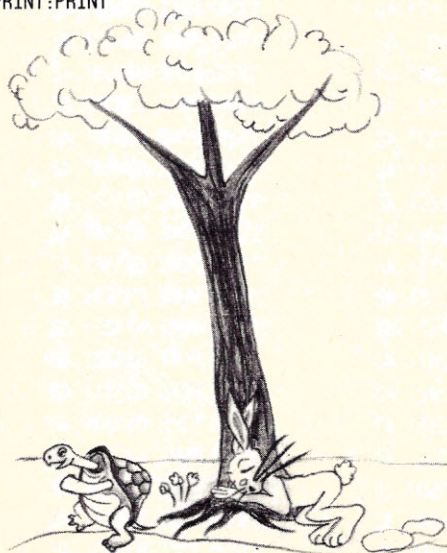
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Word Funny Listing continued

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4460 PRINT "THE COURSE WAS CHOSEN BY THE ANIMALS.":GOSUB 7000:PRINT
4470 PRINT I$;" WAS THE JUDGE. ";I$;" GAVE":GOSUB 7000:PRINT
4480 PRINT "A SHARP ";J$;"!" AND THE RACE":GOSUB 7000:PRINT
4490 PRINT "TO ";M$;" BEGAN! INSTANTLY ";B$:GOSUB 7000:PRINT
4500 PRINT "WAS OUT OF SIGHT, FAR AHEAD OF ";C$;"!":GOSUB 8000:PRINT:PRINT
4520 PRINT "";"K$;"!" YAWNED ";B$;"":GOSUB 7000:PRINT
4530 PRINT "'I HAVE TIME TO ";L$;" AND STILL":GOSUB 7000:PRINT
4540 PRINT "BEAT ";C$;"":GOSUB 9000:PRINT CHR$(26)
4560 PRINT "SO ";B$;" STRETCHED OUT ON THE":GOSUB 7000:PRINT
4570 PRINT "GRASS AND SNOOZED.":GOSUB 7000:PRINT:PRINT
4580 PRINT "ONWARD ";N$;" ";C$;"":GOSUB 7000:PRINT
4590 PRINT "HE ";N$;" PAST THE ";L$;"-ING":GOSUB 7000:PRINT
4600 PRINT B$;" HE ";N$;" HIS WAY ACROSS":GOSUB 7000:PRINT
4610 PRINT "THE FINISH LINE!":GOSUB 8000:PRINT:PRINT
4620 PRINT "WHEN ";B$;" WOKE UP - THE RACE TO":GOSUB 7000:PRINT
4630 PRINT M$;" WAS LOST.":PRINT:PRINT:PRINT
4640 GOSUB 8000:PRINT "PRESS 'RETURN' TO CONTINUE":INPUT Z$
5000 PRINT CHR$(26):PRINT "ABSOLUTELY BRILLIANT, ";A$;"!":GOSUB 8000:PRINT CHR$(26)
5010 PRINT "THE LAST 'WORD FUNNY' WAS ALSO THE GRAND FINALE!":GOSUB 8000:PRINT:PRINT
5020 PRINT "BUT YOU CAN DO IT AGAIN...":GOSUB 8000:PRINT CHR$(26)
5030 PRINT "WOULD YOU LIKE A SET OF OPTIONS?":GOSUB 7000:PRINT:PRINT "ANSWER YES OR NO":INPUT X$:PRINT CHR$(26)
5040 IF X$="YES" GOTO 5050
5045 IF X$="NO" THEN GOTO 5300:ELSE GOTO 5030
5050 PRINT "OKAY, ";A$;"":GOSUB 7000:PRINT:PRINT:PRINT
5060 PRINT "YOUR OPTIONS ARE":GOSUB 7000:PRINT
5070 PRINT "  A - START 'WORD FUNNY' AT THE BEGINNING":GOSUB 7000:PRINT
5080 PRINT "  B - REDO THE LAST 'WORD FUNNY'":GOSUB 7000:PRINT
5090 PRINT "  C - READ THE LAST 'WORD FUNNY' (UNCHANGED)":GOSUB 7000:PRINT
5100 PRINT "  D - END THE 'WORD FUNNY' GAME":GOSUB 7000:PRINT:PRINT:PRINT
5110 PRINT "ANSWER A, B, C OR D":INPUT X$:PRINT CHR$(26)
5120 IF X$="A" GOTO 2500
5130 IF X$="B" THEN GOTO 4000
5140 IF X$="C" THEN GOTO 4300
5150 IF X$="D" THEN GOTO 5300:ELSE GOTO 5060
5300 PRINT "I ENJOYED PLAYING WITH YOU, ";A$;"":GOSUB 8000:PRINT CHR$(26)
5310 PRINT "DID YOU LIKE PLAYING 'WORD FUNNY'?":GOSUB 7000:PRINT:PRINT "ANSWER YES OR NO":INPUT X$:PRINT CHR$(26)
5320 IF X$="YES" GOTO 5800:IF X$="NO" GOTO 5400:ELSE GOTO 5310
5400 PRINT "NO?!?":GOSUB 8000:PRINT CHR$(26):GOSUB 10000:PRINT CHR$(26):PRINT "SO LONG, ";A$;"":GOSUB 9000:GOTO 28000
5800 PRINT "THANK YOU, ";A$;"":GOSUB 8000:PRINT CHR$(26):PRINT:PRINT:PRINT
5810 PRINT "HAVE A WONDERFUL DAY!":GOSUB 9000:GOTO 28000
6000 END
7000 FOR K=1 TO 1500:NEXT K:RETURN
8000 FOR K=1 TO 3000:NEXT K:RETURN
9000 FOR K=1 TO 6000:NEXT K:RETURN
10000 PRINT CHR$(26)
10010 POKE 16750,195
10020 FOR A=64258! TO 64307! STEP +1
10030 POKE A,127
10040 NEXT A
10050 FOR A=61442! TO 61491! STEP +1
10060 POKE A,127
10070 NEXT A
10080 FOR A=61442! TO 64258! STEP +128
10090 POKE A,127
10100 NEXT A
10110 FOR A=64307! TO 61491! STEP -128

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Word Funny Listing continued

10120 POKE A, 127	10670 POKE 62375!, 42	11220 POKE 63242!, 42	11770 POKE 64137!, 32
10130 NEXT A	10680 POKE 62470!, 42	11230 POKE 63244!, 42	11780 POKE 64009!, 32
10140 POKE 61574!, 42	10690 POKE 62476!, 42	11240 POKE 63249!, 42	11790 POKE 64010!, 13
10150 POKE 61580!, 42	10700 POKE 62481!, 42	11250 POKE 63255!, 42	11800 POKE 64138!, 12
10160 POKE 61585!, 42	10710 POKE 62487!, 42	11260 POKE 63260!, 42	11810 FOR K=1 TO 350:NEXT K
10170 POKE 61586!, 42	10720 POKE 62492!, 42	11270 POKE 63262!, 42	11820 POKE 64138!, 32
10180 POKE 61587!, 42	10730 POKE 62498!, 42	11280 POKE 63264!, 42	11830 POKE 64010!, 32
10190 POKE 61588!, 42	10740 POKE 62503!, 42	11290 POKE 63266!, 42	11840 POKE 64011!, 13
10200 POKE 61589!, 42	10750 POKE 62598!, 42	11300 POKE 63366!, 42	11850 POKE 64139!, 12
10210 POKE 61590!, 42	10760 POKE 62604!, 42	11310 POKE 63368!, 42	11860 FOR K=1 TO 350:NEXT K
10220 POKE 61591!, 42	10770 POKE 62609!, 42	11320 POKE 63370!, 42	11870 POKE 64011!, 32
10230 POKE 61596!, 42	10780 POKE 62615!, 42	11330 POKE 63372!, 42	11880 POKE 64139!, 32
10240 POKE 61602!, 42	10790 POKE 62620!, 42	11340 POKE 63377!, 42	11890 POKE 64012!, 13
10250 POKE 61607!, 42	10800 POKE 62626!, 42	11350 POKE 63383!, 42	11900 POKE 64140!, 12
10260 POKE 61702!, 42	10810 POKE 62631!, 42	11360 POKE 63388!, 42	11910 FOR K=1 TO 350:NEXT K
10270 POKE 61708!, 42	10820 POKE 62726!, 42	11370 POKE 63390!, 42	11920 POKE 64012!, 32
10280 POKE 61713!, 42	10830 POKE 62732!, 42	11380 POKE 63392!, 42	11930 POKE 64140!, 32
10290 POKE 61719!, 42	10840 POKE 62737!, 42	11390 POKE 63394!, 42	11940 POKE 64013!, 13
10300 POKE 61724!, 42	10850 POKE 62743!, 42	11400 POKE 63398!, 42	11950 POKE 64141!, 12
10310 POKE 61730!, 42	10860 POKE 62748!, 42	11410 POKE 63399!, 42	11960 FOR K=1 TO 350:NEXT K
10320 POKE 61735!, 42	10870 POKE 62754!, 42	11420 POKE 63400!, 42	11970 POKE 64013!, 32
10330 POKE 61830!, 42	10880 POKE 62759!, 42	11430 POKE 63494!, 42	11980 POKE 64141!, 32
10340 POKE 61836!, 42	10890 POKE 62854!, 42	11440 POKE 63495!, 42	11990 POKE 64014!, 13
10350 POKE 61841!, 42	10900 POKE 62860!, 42	11450 POKE 63496!, 42	12000 POKE 64142!, 12
10360 POKE 61847!, 42	10910 POKE 62865!, 42	11460 POKE 63498!, 42	12010 FOR K=1 TO 350:NEXT K
10370 POKE 61852!, 42	10920 POKE 62871!, 42	11470 POKE 63499!, 42	12020 POKE 64142!, 32
10380 POKE 61858!, 42	10930 POKE 62876!, 42	11480 POKE 63500!, 42	12030 POKE 64014!, 32
10390 POKE 61863!, 42	10940 POKE 62882!, 42	11490 POKE 63505!, 42	12040 POKE 64143!, 12
10400 POKE 61958!, 42	10950 POKE 62887!, 42	11500 POKE 63506!, 42	12050 POKE 64015!, 13
10410 POKE 61964!, 42	10960 POKE 62982!, 42	11510 POKE 63507!, 42	12060 FOR K=1 TO 350:NEXT K
10420 POKE 61969!, 42	10970 POKE 62984!, 42	11520 POKE 63508!, 42	12070 POKE 64143!, 32
10430 POKE 61975!, 42	10980 POKE 62985!, 42	11530 POKE 63509!, 42	12080 POKE 64015!, 32
10440 POKE 61980!, 42	10990 POKE 62986!, 42	11540 POKE 63510!, 42	12090 POKE 64144!, 12
10450 POKE 61986!, 42	11000 POKE 62988!, 42	11550 POKE 63511!, 42	12100 POKE 64016!, 13
10460 POKE 61991!, 42	11010 POKE 62993!, 42	11560 POKE 63516!, 42	12110 FOR K=1 TO 350:NEXT K
10470 POKE 62086!, 42	11020 POKE 62999!, 42	11570 POKE 63517!, 42	12120 POKE 64144!, 32
10480 POKE 62092!, 42	11030 POKE 63004!, 42	11580 POKE 63518!, 42	12130 POKE 64016!, 32
10490 POKE 62097!, 42	11040 POKE 63006!, 42	11590 POKE 63520!, 42	12140 POKE 64145!, 12
10500 POKE 62103!, 42	11050 POKE 63007!, 42	11600 POKE 63521!, 42	12150 POKE 64017!, 13
10510 POKE 62108!, 42	11060 POKE 63008!, 42	11610 POKE 63522!, 42	12160 FOR K=1 TO 350:NEXT K
10520 POKE 62114!, 42	11070 POKE 63010!, 42	11620 POKE 63526!, 42	12170 POKE 64145!, 32
10530 POKE 62119!, 42	11080 POKE 63015!, 42	11630 POKE 63527!, 42	12180 POKE 64017!, 32
10540 POKE 62214!, 42	11090 POKE 63110!, 42	11640 POKE 63528!, 42	12190 POKE 64146!, 12
10550 POKE 62220!, 42	11100 POKE 63112!, 42	11650 POKE 64007!, 13	12200 POKE 64018!, 13
10560 POKE 62225!, 42	11110 POKE 63114!, 42	11660 POKE 64135!, 12	12210 FOR K=1 TO 350:NEXT K
10570 POKE 62231!, 42	11120 POKE 63116!, 42	11670 POKE 64007!, 32	12220 POKE 64146!, 32
10580 POKE 62236!, 42	11130 POKE 63121!, 42	11680 POKE 64135!, 32	12230 POKE 64018!, 32
10590 POKE 62242!, 42	11140 POKE 63127!, 42	11690 POKE 64008!, 13	12240 POKE 64147!, 12
10600 POKE 62247!, 42	11150 POKE 63132!, 42	11700 POKE 64136!, 12	12250 POKE 64019!, 13
10610 POKE 62342!, 42	11160 POKE 63134!, 42	11710 FOR K=1 TO 350:NEXT K	12260 FOR K=1 TO 350:NEXT K
10620 POKE 62348!, 42	11170 POKE 63136!, 42	11720 POKE 64008!, 32	12270 POKE 64147!, 32
10630 POKE 62353!, 42	11180 POKE 63138!, 42	11730 POKE 64136!, 32	12280 POKE 64019!, 32
10640 POKE 62359!, 42	11190 POKE 63143!, 42	11740 POKE 64137!, 12	12290 POKE 64148!, 12
10650 POKE 62364!, 42	11200 POKE 63238!, 42	11750 POKE 64009!, 13	12300 POKE 64020!, 13
10660 POKE 62370!, 42	11210 POKE 63240!, 42	11760 FOR K=1 TO 350:NEXT K	12310 FOR K=1 TO 350:NEXT K

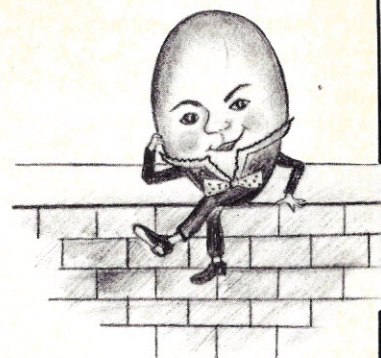
Word Funny Listing continued

12320 POKE 64148!,32	12870 POKE 64159!,32	13420 POKE 63528!,32
12330 POKE 64020!,32	12880 POKE 64031!,32	13430 POKE 63784!,42
12340 POKE 64149!,12	12890 POKE 64160!,12	13440 POKE 63783!,42
12350 POKE 64021!,13	12900 POKE 64032!,13	13450 POKE 63782!,42
12360 FOR K=1 TO 350:NEXT K	12910 FOR K=1 TO 350:NEXT K	13460 FOR K=1 TO 500:NEXT K
12370 POKE 64149!,32	12920 POKE 64160!,32	13470 POKE 63656!,32
12380 POKE 64021!,32	12930 POKE 64032!,32	13480 POKE 63655!,32
12390 POKE 64150!,12	12940 POKE 64161!,12	13490 POKE 63654!,32
12400 POKE 64022!,13	12950 POKE 64033!,13	13500 POKE 63912!,42
12410 FOR K=1 TO 350:NEXT K	12960 FOR K=1 TO 350:NEXT K	13510 POKE 63911!,42
12420 POKE 64150!,32	12970 POKE 64161!,32	13520 POKE 63910!,42
12430 POKE 64022!,32	12980 POKE 64033!,32	13530 FOR K=1 TO 500:NEXT K
12440 POKE 64151!,12	12990 POKE 64162!,12	13540 POKE 63784!,32
12450 POKE 64023!,13	13000 POKE 64034!,13	13550 POKE 63783!,32
12460 FOR K=1 TO 350:NEXT K	13010 FOR K=1 TO 350:NEXT K	13560 POKE 63782!,32
12470 POKE 64151!,32	13020 POKE 64162!,32	13570 POKE 64040!,42
12480 POKE 64023!,32	13030 POKE 64034!,32	13580 POKE 64039!,42
12490 POKE 64152!,12	13040 POKE 64163!,12	13590 POKE 64038!,42
12500 POKE 64024!,13	13050 POKE 64035!,13	13600 PRINT "%"
12510 FOR K=1 TO 350:NEXT K	13060 FOR K=1 TO 350:NEXT K	13610 FOR K=1 TO 500:NEXT K
12520 POKE 64152!,32	13070 POKE 64163!,32	13620 POKE 63912!,32
12530 POKE 64024!,32	13080 POKE 64035!,32	13630 POKE 63911!,32
12540 POKE 64153!,12	13090 POKE 64164!,12	13640 POKE 63910!,32
12550 POKE 64025!,13	13100 POKE 64036!,13	13650 POKE 64168!,42
12560 FOR K=1 TO 350:NEXT K	13110 FOR K=1 TO 350:NEXT K	13660 POKE 64167!,42:PRINT"%"
12570 POKE 64153!,32	13120 POKE 64164!,32	13670 POKE 64166!,42
12580 POKE 64025!,32	13130 POKE 64036!,32	13680 FOR K=1 TO 5000:NEXT K:PRINT CHR\$(26):RETURN
12590 POKE 64154!,12	13140 POKE 64165!,12	17000 PRINT CHR\$(26)
12600 POKE 64026!,13	13150 POKE 64037!,13	17010 POKE 16750,195
12610 FOR K=1 TO 350:NEXT K	13160 FOR K=1 TO 350:NEXT K	17020 FOR A=61442! TO 61491! STEP +1
12620 POKE 64154!,32	13170 POKE 64165!,32	17030 POKE A,22
12630 POKE 64026!,32	13180 POKE 64037!,32	17040 NEXT A
12640 POKE 64155!,12	13190 POKE 64166!,12	17050 FOR A=64258! TO 64307! STEP +1
12650 POKE 64027!,13	13200 POKE 64038!,13	17060 POKE A,127
12660 FOR K=1 TO 350:NEXT K	13210 FOR K=1 TO 350:NEXT K	17070 NEXT A
12670 POKE 64155!,32	13220 POKE 64166!,32	17080 POKE 61457!,22
12680 POKE 64027!,32	13230 POKE 64038!,32	17090 POKE 61459!,22
12690 POKE 64156!,12	13240 POKE 64167!,12	17100 POKE 61570!,22
12700 POKE 64028!,13	13250 POKE 64039!,13	17110 POKE 61586!,111
12710 FOR K=1 TO 350:NEXT K	13260 FOR K=1 TO 350:NEXT K	17120 POKE 61599!,111
12720 POKE 64156!,32	13270 POKE 63527!,32	17130 POKE 61619!,22
12730 POKE 64028!,32	13280 POKE 63526!,32	17140 POKE 61698!,22
12740 POKE 64157!,12	13290 POKE 63528!,32	17150 POKE 61714!,111
12750 POKE 64029!,13	13300 POKE 63399!,32	17160 POKE 61727!,111
12760 FOR K=1 TO 350:NEXT K	13310 POKE 63398!,32	17170 POKE 61747!,22
12770 POKE 64157!,32	13320 POKE 63400!,32	17180 POKE 61826!,22
12780 POKE 64029!,32	13330 POKE 63527!,42	17190 POKE 61842!,111
12790 POKE 64158!,12	13340 POKE 63526!,42	17200 POKE 61855!,111
12800 POKE 64030!,13	13350 POKE 63528!,42	17210 POKE 61875!,22
12810 FOR K=1 TO 350:NEXT K	13360 POKE 63656!,42	17220 POKE 61954!,22
12820 POKE 64158!,32	13370 POKE 63655!,42	17230 POKE 61970!,111
12830 POKE 64030!,32	13380 POKE 63654!,42	17240 POKE 61983!,111
12840 POKE 64159!,12	13390 FOR K=1 TO 500:NEXT K	17250 POKE 62003!,22
12850 POKE 64031!,13	13400 POKE 63527!,32	17260 POKE 62082!,22
12860 FOR K=1 TO 350:NEXT K	13410 POKE 63526!,32	17270 POKE 62131!,22

Word Funny Listing continued

17280 POKE 62210!,22
 17290 FOR A=62093! TO 62117! STEP +1
 17300 POKE A,22
 17310 NEXT A
 17320 FOR A=62221! TO 62245!
 17330 POKE A,22
 17340 NEXT A
 17350 POKE 62259!,22
 17360 POKE 62338!,22
 17370 POKE 62387!,22
 17380 POKE 62466!,22
 17390 POKE 62515!,22
 17400 POKE 62594!,22
 17410 POKE 62643!,22
 17420 POKE 62722!,22
 17430 POKE 62771!,22
 17440 POKE 62850!,22
 17450 POKE 62899!,22
 17460 POKE 62978!,22
 17470 POKE 63027!,22
 17480 POKE 63106!,22
 17490 POKE 63155!,22
 17500 POKE 63234!,22
 17510 POKE 63283!,22
 17520 POKE 63362!,22
 17530 POKE 63411!,22
 17540 POKE 63490!,22
 17550 POKE 63539!,22
 17560 POKE 63618!,22
 17570 POKE 63667!,22
 17580 POKE 63746!,22
 17590 POKE 63795!,22
 17600 POKE 63874!,22
 17610 POKE 63923!,22
 17620 POKE 64002!,22
 17630 POKE 64051!,22
 17640 POKE 64130!,22
 17650 POKE 64179!,22
 17660 POKE 64131!,12
 17670 POKE 64003!,13
 17680 FOR K=1 TO 350:NEXT K
 17690 POKE 64131!,32
 17700 POKE 64003!,32
 17710 POKE 64132!,12
 17720 POKE 64004!,13
 17730 FOR K=1 TO 350:NEXT K
 17740 POKE 64132!,32
 17750 POKE 64004!,32
 17760 POKE 64133!,12
 17770 POKE 64005!,13
 17780 FOR K=1 TO 350:NEXT K
 17790 POKE 64133!,32
 17800 POKE 64005!,32
 17810 POKE 64134!,12
 17820 POKE 64006!,13

17830 FOR K=1 TO 350:NEXT K
 17840 POKE 64134!,32
 17850 POKE 64006!,32
 17860 POKE 64135!,12
 17870 POKE 64007!,13
 17880 FOR K=1 TO 350:NEXT K
 17890 POKE 64135!,32
 17900 POKE 64007!,32
 17910 POKE 64136!,12
 17920 POKE 64008!,13
 17930 FOR K=1 TO 350:NEXT K
 17940 POKE 64136!,32
 17950 POKE 64008!,32
 17960 POKE 64137!,12
 17970 POKE 64009!,13
 17980 FOR K=1 TO 350:NEXT K
 17990 POKE 64137!,32
 18000 POKE 64009!,32
 18010 POKE 64138!,12
 18020 POKE 64010!,13
 18030 FOR K=1 TO 350:NEXT K
 18040 POKE 64138!,32
 18050 POKE 64010!,32
 18060 POKE 64139!,12
 18070 POKE 64011!,13
 18080 FOR K=1 TO 350:NEXT K
 18090 POKE 64139!,32
 18100 POKE 64011!,32
 18110 POKE 64140!,12
 18120 POKE 64012!,13
 18130 FOR K=1 TO 350:NEXT K
 18140 POKE 64140!,32
 18150 POKE 64012!,32
 18160 POKE 64141!,12
 18170 POKE 64013!,13
 18180 FOR K=1 TO 350:NEXT K
 18190 POKE 64141!,32
 18200 POKE 64013!,32
 18210 POKE 64142!,12
 18220 POKE 64014!,13
 18230 FOR K=1 TO 350:NEXT K
 18240 POKE 64142!,32
 18250 POKE 64014!,32
 18260 POKE 64143!,12
 18270 POKE 64015!,13
 18280 FOR K=1 TO 350:NEXT K
 18290 POKE 64143!,32
 18300 POKE 64015!,32
 18310 POKE 64144!,12
 18320 POKE 64016!,13
 18330 FOR K=1 TO 350:NEXT K
 18340 POKE 64144!,32
 18350 POKE 64016!,32
 18360 POKE 64145!,12
 18370 POKE 64017!,13



Word Funny Listing continued

18380 FOR K=1 TO 350:NEXT K
 18390 POKE 64145!,32
 18400 POKE 64017!,32
 18410 POKE 64146!,12
 18420 POKE 64018!,13
 18430 FOR K=1 TO 350:NEXT K
 18440 POKE 64146!,32
 18450 POKE 64018!,32
 18460 POKE 64147!,12
 18470 POKE 64019!,13
 18480 FOR K=1 TO 350:NEXT K
 18490 POKE 64147!,32
 18500 POKE 64019!,32
 18510 POKE 64148!,12
 18520 POKE 64020!,13
 18530 FOR K=1 TO 350:NEXT K
 18540 POKE 64148!,32
 18550 POKE 64020!,32
 18560 POKE 64149!,12
 18570 POKE 64021!,13
 18580 FOR K=1 TO 350:NEXT K
 18590 POKE 64149!,32
 18600 POKE 64021!,32
 18610 POKE 64150!,12
 18620 POKE 64022!,13
 18630 FOR K=1 TO 350:NEXT K
 18640 POKE 64150!,32
 18650 POKE 64022!,32
 18660 POKE 64151!,12
 18670 POKE 64023!,13
 18680 FOR A=62108! TO 62093! STEP -1
 18690 POKE A,32
 18700 NEXT A
 18710 FOR A=62109! TO 62117! STEP +1:POKE A,32:NEXT A
 18720 FOR A=62373! TO 62349! STEP -1:POKE A,22:NEXT A
 18730 FOR A=62221! TO 62245! STEP +1:POKE A,32:NEXT A
 18740 FOR A=62349! TO 62374! STEP +1
 18750 POKE A,22
 18760 NEXT A
 18770 FOR A=62477! TO 62501! STEP +1
 18780 POKE A,22
 18790 NEXT A
 18800 FOR A=62349! TO 62374! STEP +1
 18810 POKE A,32
 18820 NEXT A
 18830 FOR A=62605! TO 62630! STEP +1
 18840 POKE A,22
 18850 NEXT A
 18860 FOR A=62477! TO 62501! STEP +1
 18870 POKE A,32
 18880 NEXT A
 18890 FOR A=62733! TO 62758! STEP +1
 18900 POKE A,22
 18910 NEXT A
 18920 FOR A=62605! TO 62630! STEP +1
 18930 POKE A,32
 18940 NEXT A
 18950 FOR A=62861! TO 62886! STEP +1
 18960 POKE A,22
 18970 NEXT A
 18980 FOR A=62733! TO 62758! STEP +1
 18990 POKE A,32
 19000 NEXT A
 19010 FOR A=62989! TO 63014! STEP +1
 19020 POKE A,22
 19030 NEXT A
 19040 FOR A=62861! TO 62886! STEP +1
 19050 POKE A,32
 19060 NEXT A
 19070 FOR A=63117! TO 63142! STEP +1
 19080 POKE A,22
 19090 NEXT A
 19100 FOR A=62989! TO 63014! STEP +1
 19110 POKE A,32
 19120 NEXT A
 19130 FOR A=63245! TO 63270! STEP +1
 19140 POKE A,22
 19150 NEXT A
 19160 FOR A=63117! TO 63142! STEP +1
 19170 POKE A,32
 19180 NEXT A
 19190 FOR A=63373! TO 63398! STEP +1
 19200 POKE A,22
 19210 NEXT A
 19220 FOR A=63245! TO 63270! STEP +1
 19230 POKE A,32
 19240 NEXT A
 19250 FOR A=63501! TO 63526! STEP +1
 19260 POKE A,22
 19270 NEXT A
 19280 FOR A=63373! TO 63398! STEP +1
 19290 POKE A,32
 19300 NEXT A
 19310 FOR A=63629! TO 63654! STEP +1
 19320 POKE A,22
 19330 NEXT A
 19340 FOR A=63501! TO 63526! STEP +1
 19350 POKE A,32
 19360 NEXT A
 19370 FOR A=63757! TO 63782! STEP +1
 19380 POKE A,22
 19390 NEXT A
 19400 FOR A=63629! TO 63654! STEP +1
 19410 POKE A,32
 19420 NEXT A
 19430 FOR A=63885! TO 63910! STEP +1
 19440 POKE A,22
 19450 NEXT A
 19460 FOR A=63757! TO 63782! STEP +1
 19470 POKE A,32

Word Funny Listing continued

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19480 NEXT A
19490 FOR A=64013! TO 64038! STEP +1:PRINT""
19500 POKE A,22
19510 NEXT A
19520 FOR A=63885! TO 63910! STEP +1
19530 POKE A,32
19540 NEXT A
19550 FOR A=64141! TO 64166! STEP +1
19560 POKE A,22
19570 NEXT A
19580 FOR K=1 TO 5000:NEXT K:RETURN
21000 PRINT CHR$(26)
21010 PRINT CHR$(26)
21020 FOR A=64307! TO 61491! STEP -128
21030 POKE A,1
21040 NEXT A
21050 FOR A=64307! TO 61494! STEP -128
21060 NEXT A
21070 FOR A=64258! TO 64307! STEP +1
21080 POKE A,1:NEXT A
21090 FOR A=61442! TO 64258! STEP +128:POKE A,1:NEXT A
21100 FOR A=61442! TO 61491! STEP +1:POKE A,1:NEXT A
21110 POKE 62224!,22
21120 POKE 62225!,22
21130 POKE 62226!,22
21140 POKE 62227!,22
21150 POKE 62228!,22
21160 POKE 62229!,22
21170 POKE 62230!,22
21180 POKE 62231!,22
21190 POKE 62232!,22
21200 POKE 62233!,22
21210 POKE 62234!,22
21220 POKE 62235!,22
21230 POKE 62236!,22
21240 POKE 62237!,22
21250 POKE 62238!,22
21260 POKE 62239!,22
21270 POKE 62240!,22
21280 POKE 62241!,22
21290 POKE 62242!,22
21300 POKE 62243!,22
21310 POKE 62352!,22
21320 POKE 62354!,127
21330 POKE 62355!,127
21340 POKE 62356!,127
21350 POKE 62357!,127
21360 POKE 62365!,127
21370 POKE 62366!,127
21380 POKE 62367!,127
21390 POKE 62368!,127
21400 FOR A=62096! TO 62115! STEP +1:POKE A,1:NEXT A
21410 POKE 62371!,22
21420 POKE 62478!,22
21430 POKE 62479!,22

```



```

21440 POKE 62480!,22
21450 POKE 62483!,2
21460 FOR A=62489! TO 62873! STEP +128:POKE A,1:NEXT A
21470 POKE 62495!,14
21480 POKE 62499!,22
21490 POKE 62500!,22
21500 POKE 62501!,22
21510 POKE 62606!,22
21520 POKE 62608!,22
21530 POKE 62627!,22
21540 POKE 62629!,22
21550 POKE 62734!,22
21560 POKE 62736!,22
21570 POKE 62755!,22
21580 POKE 62757!,22
21590 POKE 62862!,22
21600 POKE 62863!,22
21610 POKE 62864!,22
21620 POKE 62883!,22
21630 POKE 62884!,22
21640 POKE 62885!,22
21650 POKE 62992!,22
21660 POKE 63011!,22
21670 POKE 63120!,22
21680 POKE 63139!,22
21690 POKE 63248!,22
21700 POKE 63267!,22
21710 POKE 63376!,22
21720 POKE 63395!,22
21730 POKE 63504!,22
21740 POKE 63523!,22
21750 POKE 63632!,22
21760 POKE 63633!,22
21770 POKE 63634!,22
21780 POKE 63635!,22
21790 POKE 63636!,22
21800 POKE 63637!,22
21810 POKE 63638!,22
21820 POKE 63639!,22
21830 POKE 63640!,22
21840 POKE 63641!,22
21850 POKE 63642!,22
21860 POKE 63643!,22
21870 POKE 63644!,22
21880 POKE 63645!,22
21890 POKE 63646!,22
21900 POKE 63647!,22
21910 POKE 63648!,22
21920 POKE 63649!,22
21930 POKE 63650!,22
21940 POKE 63651!,22
21950 POKE 63385!,22
21960 FOR K=1 TO 200:NEXT K
21970 POKE 63386!,22:POKE 63384!,22

```



Word Funny Listing continued

21980 FOR K=1 TO 200:NEXT K	28480 POKE 63272!,0
21990 POKE 63387!,22:POKE 63383!,22	28490 POKE 63273!,0
22000 FOR K=1 TO 200:NEXT K	28500 POKE 63370!,0
22010 POKE 63388!,22:POKE 63382!,22	28510 POKE 63377!,0
22020 FOR K=1 TO 200:NEXT K	28520 POKE 63382!,0
22030 POKE 63261!,22:POKE 63253!,22	28530 POKE 63389!,0
22040 FOR K=1 TO 5000:NEXT K:RETURN	28540 POKE 63394!,0
28000 PRINT CHR\$(26)	28550 POKE 63498!,0
28010 POKE 61962!,0	28560 POKE 63505!,0
28020 POKE 62090!,0	28570 POKE 63510!,0
28030 POKE 62218!,0	28580 POKE 63517!,0
28040 POKE 62346!,0	28590 POKE 63522!,0
28050 POKE 62474!,0	28600 POKE 63626!,0
28060 POKE 62602!,0	28610 POKE 63627!,0
28070 POKE 62730!,0	28620 POKE 63628!,0
28080 POKE 62858!,0	28630 POKE 63629!,0
28090 POKE 62859!,0	28640 POKE 63630!,0
28100 POKE 62860!,0	28650 POKE 63631!,0
28110 POKE 62861!,0	28660 POKE 63632!,0
28120 POKE 62862!,0	28670 POKE 63633!,0
28130 POKE 62863!,0	28680 POKE 63638!,0
28140 POKE 62864!,0	28690 POKE 63639!,0
28150 POKE 62865!,0	28700 POKE 63640!,0
28160 POKE 62870!,0	28710 POKE 63641!,0
28170 POKE 62877!,0	28720 POKE 63642!,0
28180 POKE 62882!,0	28730 POKE 63643!,0
28190 POKE 62883!,0	28740 POKE 63644!,0
28200 POKE 62884!,0	28750 POKE 63645!,0
28210 POKE 62885!,0	28760 POKE 63650!,0
28220 POKE 62886!,0	28770 POKE 63651!,0
28230 POKE 62887!,0	28780 POKE 63652!,0
28240 POKE 62888!,0	28790 POKE 63653!,0
28250 POKE 62889!,0	28800 POKE 63654!,0
28260 POKE 62986!,0	28810 POKE 63655!,0
28270 POKE 62993!,0	28820 POKE 63656!,0
28280 POKE 62998!,0	28830 POKE 63657!,0
28290 POKE 63005!,0	28840 POKE 63773!,0
28300 POKE 63010!,0	28850 POKE 63901!,0
28310 POKE 63017!,0	28860 POKE 64029!,0
28320 POKE 63114!,0	28870 POKE 64157!,0
28330 POKE 63121!,0	28880 POKE 64278!,0
28340 POKE 63126!,0	28890 POKE 64279!,0
28350 POKE 63133!,0	28900 POKE 64280!,0
28360 POKE 63138!,0	28910 POKE 64281!,0
28370 POKE 63145!,0	28920 POKE 64282!,0
28380 POKE 63242!,0	28930 POKE 64283!,0
28390 POKE 63249!,0	28940 POKE 64284!,0
28400 POKE 63254!,0	28950 POKE 64285!,0
28410 POKE 63261!,0	28960 FOR K=1 TO 5000:NEXT K:GOTO 6000
28420 POKE 63266!,0	
28430 POKE 63267!,0	
28440 POKE 63268!,0	
28450 POKE 63269!,0	
28460 POKE 63270!,0	
28470 POKE 63271!,0	

END OF LISTING

Continued from page 29

proved to be from a different manufacturer than the original. It is so stiff, especially my spacebar as to be virtually unusable. Do you have any suggestions to improve the touch? I've written to Witt Services about it, but haven't yet received a reply. Is there a higher quality word processing keyboard available that will plug in and work? The loss of portability would be of no consequence, but I must have a keyboard that can be typed on at [great] speed.

This may be a good time to mention a new printer that I've been using, an Olympia electronic compact NP. It claims Epson compatibility and has proven to be so as far as I can tell. It gives a much better looking printout than my Gemini 10X, and is significantly quieter in the process. I don't see them advertised and that's a shame, it's a fine little printer with a number of nifty features. Perhaps you could do a review of it in a future issue.

The Portable Companion and those connected with it have my best wishes and full support, it's good to see you back.

Ron Brown
Delhi, NY

Distressed

Many thanks to you and the folks at TUG for reviving *The Portable Companion*. It was sorely missed, and I'm sure that other Osborne owners are grateful for its return.

I am, however, most distressed by a number of factors relating to its return and feel that I must write and express my concerns. Primarily, and probably most importantly, I can't help but feel that there's been a major change in the philosophy of OCC...for the worse. Osborne's philosophy has always been to provide the best product at the best price. The Osborne 1 was the first computer to offer real computing power at a previously unheard-of value. That was the reason for Osborne's overwhelming success and dedicated following. Since, as we all know, that was not the reason

Continued on page 75

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Enhance WordStar's Print Facility With SPRINT

SPRINT is a printer initialization program to make WordStar's print facilities more powerful and flexible.

Doug Hurst

Although this article uses an EPSON printer and an Osborne computer as examples, please do not skim past it because you have different hardware. WordStar is the only must-have item; the rest should be adaptable.

SPRINT was so named for its ability to enhance WordStar's printing process. At first glance, it may seem slightly complicated, but installation is quite easy if tackled one step at a time.

Necessity may be the mother of invention, but in my case the mother is laziness. It has always been especially irritating to have to leave the keyboard to mess with my printer. I experimented with WordStar's regular printer initialization and finish strings, but they were frustrating to use — satisfactory but rather inflexible. Also, I didn't like having to use the limited number of user-defined print control codes WordStar has

to offer on commands that apply to an entire document. Thus, SPRINT was created.

The original version of SPRINT was written to be assembled into a separate ".COM" file for execution. Its purpose was to issue form feeds, line feeds, reset to power up, skip over the perforation, and send compressed, emphasized, or italic print codes to my Epson printer.

Why did I need such a program? In my attempts to learn 8080 and Z80 assembly language, from a variety of texts, I was using CP/M's TYPE command (in conjunction with Control-P) to quickly list source code. The TYPE command, unlike a good word processor, stops dead when the end of file is reached. This resulted in the requirement to issue one or more form feeds to remove the paper and review the

LABEL	VERSION		
	2.26	3.00	3.30
MORPAT:	02DE	02DE	02BB
PRINIT:	070D	070D	0711
PRFINI:	0710	0710	0714
PBGMEM:	035C (7321)	035C (7849)	034B (846D)

Table 1. WordStar labels, addresses and values that are pertinent to the installation of SPRINT.

```

*****
* (1) Formfeed (2) Linefeed (3) Reset TOF (4) Expanded (5) Comp Print *
* (6) Emphasized (7) Italics          +++ (^P) CONTINUE Print +++ *
***** YOUR CHOICE? : *****
F File directory          now ON | P Stop PRINT | X EXIT to system
H Set help level          | | |
---Commands to open a file--- | E RENAME a file | -WordStar
Options-
  D Open a document file    | O COPY a file | M Run MailMerge
  N Open a non-document file | Y DELETE a file | S Run SpellStar

directory of disk B:
SICOVER.USC SIPERT.USC SPRINT.ASM SPRINT2.ART SPRINT2.BAK

```

Figure 1. SPRINT invoked from the "editing no file" or "not editing" menu.

```

*****
* (1) Formfeed (2) Linefeed (3) Reset TOF (4) Expanded (5) Comp Print *
* (6) Emphasized (7) Italics          +++ (^P) CONTINUE Print +++ *
***** YOUR CHOICE? : *****
L-----!-----!-----!-----!-----!-----!-----!-----!-----!-----R
      VARIABLE PRINTER INITIALIZATION/FINISH FOR WORDSTAR

```

Listed below are some addresses that will be pertinent to the installation of SPRINT. Successful installations have been performed on each of the versions listed. If you are running a different version, you should definitely consult MicroPro and/or the installation section of your user's manual.

Figure 2. SPRINT invoked while editing a file.

source code.

I like to print source code listings in compressed print, especially ".PRN" listings which are wider due to the address/hex listings added during assembly. SPRINT.COM was such an aid to my learning effort that it occurred to me how powerful a tool it could be if it could somehow be incorporated into WordStar. End of history lesson; let's see how SPRINT works.

How SPRINT Works

Each time you send a document off to the printer, SPRINT will present you with a menu of possible print commands. This is true either from the "Not editing" menu, or while editing (See figures 1 and 2).

You may send as many of the commands as you desire and then simply hit Control-P (^P) to continue the printing

process. That's all there is to it as far as user interaction is concerned. At the completion of the printing task, you are once again presented with the menu, mainly so that you can issue form feeds or line feeds, or turn off any codes by resetting to a power-up configuration.

more difficult or impossible.

There are strategic points during the execution of the WordStar program where these user-defined subroutines are called. For normally installed versions, these routines are "capped off". In other words, the routine is called,

It's irritating to have to leave the keyboard to mess with my printer, and WordStar's regular printer initialization and finish strings are frustrating to use — satisfactory but rather inflexible. Thus SPRINT was created.

Another press of ^P will return you to the "Not editing" menu or to your document to be edited.

SPRINT is made possible by MicroPro. Not literally, but if they hadn't built several "ports" into WordStar which are specifically designed to accommodate user-designed subroutines, SPRINT would have been

then runs smack into a RETURN instruction, and continues on its original path (See figure 3).

With SPRINT, when the subroutine is called it is greeted with a JMP (Jump) instruction to the beginning of the MORPAT: area where a portion of the total SPRINT program is permanently resident. This requires *no enlargement* of

WS.COM — this internal code reads in and calls SPRINT.OVR. It is at this point that the menu is generated. After making your selections and hitting ^P, the normal printing process begins following a little housekeeping by the internal portion of SPRINT (See figure 4).

Now if, after reading this explanation of its operation, you do not feel SPRINT will be of any value to you, you are welcome to continue to peruse your *Portable Companion*. If you want to continue, we're ready to install SPRINT.

Coding and Installation

Listed in table 1 are some WordStar labels, addresses and values that will be pertinent to the installation of SPRINT. Successful installations have been performed on each of the versions listed (eight-bit machines all). If you are running a different version, you should definitely consult MicroPro and/or the installation section of your user's manual for the equivalent numbers.

The first label, MORPAT:, is an area built into WordStar for the specific purpose of user supplied code/subroutines. I imagine it trans-

lates into MORE PATches. There are many ports in WordStar which can be altered to call user supplied routines located in the MORPAT: area.

The two labels altered in installing SPRINT are the two immediately following MORPAT: in the list above, PRINIT: and PRFINI:. PRINIT: (Printer Routine INITIAL) is called every time a document is sent to your printer and prior to sending the string of characters from PSINIT: (Printer String INITIAL). PRFINI: (Printer

Routine FINish) is called upon completion of the printing task and prior to PSFINI: (Printer String FINish).

PSINIT: and PSFINI: can be set during the normal installation process using (W)INSTALL.COM. (Note: it is recommended, though not forbidden, that you *do not* install PSINIT: and PSFINI: if you are using SPRINT.)

As stated earlier, for a normally installed WordStar, the calls to PRINIT: and PRFINI: are invisible to the user, since they result in immediate returns. If, for example, you were to take a look

Figure 3. WordStar's normal printing sequence.

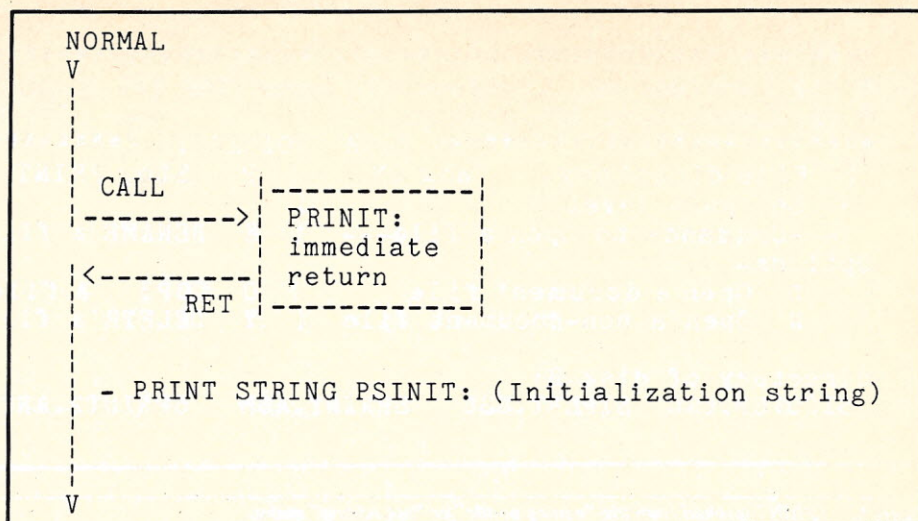


Figure 4. Printing sequence with WordStar and SPRINT.

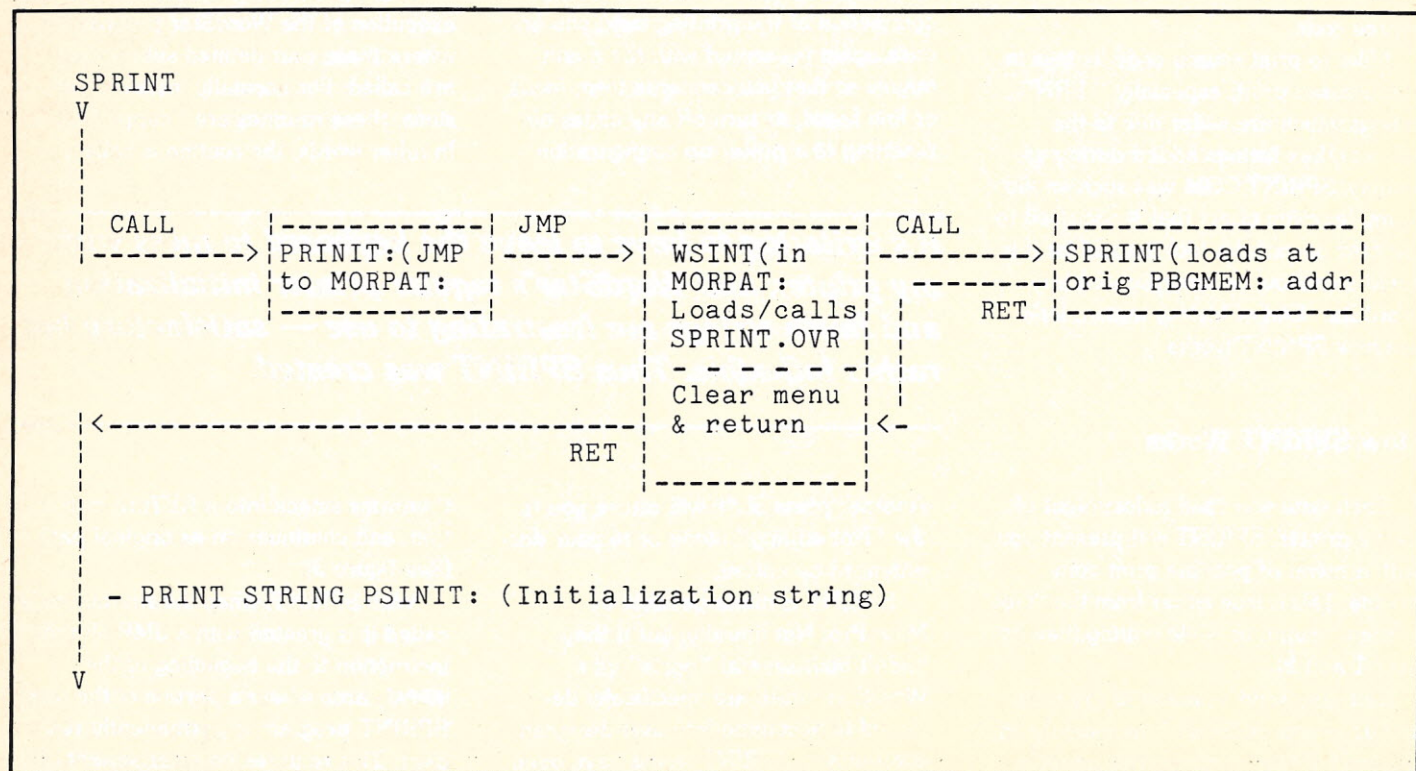


FIG 5

```

;
; SPRINT - a program to issue formfeed, linefeed, set top
; of form instructions and/or turn on expanded/
; compressed/emphasized/italic print modes
; to your printer from within WordStar
;
; Author: D. M. HURST
; Date: May 12, 1984
; Version: 2.4
;
; *****
; START OF EQUATES
; *****
;
; TRUE/FALSE
false equ 00h
true equ not false
small equ false ;true for 52 col/false for 80 col
;
; STANDARD ASCII STUFF
;
bs equ 08h ;backspace
bel equ 07h ;bell
;
; UNIVERSAL ASCII COMMANDS
;
ff equ 0ch ;formfeed
lf equ 0ah ;linefeed
cr equ 0dh ;carriage return
esc equ 1bh ;escape
;
;
; EPSON SPECIFIC ESCAPE CODES
; You will have to substitute
; codes for your printer if it is another make. Also check
; the subroutines that send these codes to the printer. Your
; printer may or may not require lead-in escape codes and it
; may require more than one code. HP printers are notorious
; for this.
;
tof equ 40h ;top of form
EPSON
;expand equ 57h ;expanded on
EPSON
comp equ 0fh ;turn on compressed
EPSON
emph equ 45h ;turn on emphasized
EPSON
ital equ 34h ;turn on italics
EPSON
;
; BDOS CALLS
;
bdos equ 05h ;bdos entry point
conin equ 01h ;console input
conout equ 02h ;console output
lstout equ 05h ;list output
prints equ 09h ;print string/buffer
;
; THE STARTING POINT CAN VARY

```

```

;
base equ 0100h
;
destin equ XXXXh-base ;actual destination-org address
;must equal PBGMEM: for your
;version of WordStar
;
; *****
; END OF EQUATES
; *****
;
; org base ;start
;
; *****
; START OF MAIN PROGRAM AREA
; *****
;
start: equ $+destin;Each label is offset to
;maintain addr integrity.
;
call menu ;print menu
mvi c,conin ;Get response.
call bdos ;
cpi 10h ;Is it ^P? ^P used to make
rz ;exit from SPRINT a slightly more
;conscious effort.
sui 31h ;convert from ASCII to binary and 1 more
cpi 0h ;
jm error1 ;error if input < 0
cpi 7h ;
jp error1 ;error if input > 7
;
; TABLE LOOKUP ROUTINE TO DETERMINE WHICH SUBROUTINE TO JUMP TO
;
add a ;double adjusted input in A (rem words not bytes)
mov l,a ;put result in L (lookup table offset)
mvi h,0 ;and 0 the H
lxi b,lookup;get start addr of lookup table
dad b ;add offset to base
mov a,m ;place new addr in HL (LSB 1st, MSB 2nd)
inx h
mov h,m
mov l,a
pchl ;jump to address now contained in HL
;
error1: equ $+destin
lxi d,error1;This routine presents an error
call string ;message (for improper input) on
mvi a,bel ;the screen for about 2 seconds.
call cchar ;then jumps back and starts the
call delay ;program over.
jmp start ;
;
; *****
; END OF MAIN PROGRAM AREA
; *****
;
; START OF SUBROUTINE AREA
; *****

```



```

; MENU HOMES CURSOR AND PRESENTS SPRINT MENU
;
menu: equ    $+destin
      mvi    a,1eh ;Osborne Home Cursor code
      call   cchar
      lxi    d,prmt1;is the menu
      call   string
      ret

;
; FORMFEED SUBROUTINE (1 - 9 FORMFEEDS)
;
form: equ    $+destin
      lxi    d,prmt2; is the prompt for how many feeds (1-9)
      call   string ; print it
      mvi    c,conin ; get input
      call   bdos
      sui    30h ; convert from ASCII
      cpi    01h ; checks for input ( 1 or ) 9.
      jm     errorc ; same message for error either way.
      cpi    0ah
      jp     errorc
      mov    b,a ; input OK so place amount in B as count
over: equ    $+destin
      mvi    a,ff ; formfeed character in A
      call   lister ; send to list device
      dcr    b ; down the count in B
      jnz    over ; send formfeeds until count is 0
      jmp    start ; jmp to start of program
errorc: equ   $+destin; This routine presents an error
      lxi    d,error2; message (for improper input) on
      call   string ; the screen for about 2 seconds.
      mvi    a,bel ; then jumps back and prompts for
      call   cchar ; how many formfeeds again.
      call   delay
      jmp    form

;
; LINEFEED SUBROUTINE (ISSUED INDIVIDUALLY)
;
line: equ    $+destin
      mvi    a,lf ; Simple enough. Place a linefeed
      call   lister ; in A and send it to the list device.
      jmp    start

;
; RESET TO POWER-UP (INCLUDING TOP OF FORM (TOF))
;
pwrup: equ   $+destin
      mvi    a,esc ; The next 5 routines are essentially
      call   lister ; the same. Each sends first an
      mvi    a,tof ; escape code then a command code to
      call   lister ; the list device.
      jmp    start

;
; TURN ON EXPANDED PRINT
;
exp: equ     $+destin
      mvi    a,esc
      call   lister
      mvi    a,expand
      call   lister

;
      mvi    a,1 ; Turning on Expanded print requires
      call   lister ; a follow-on code of 1.
      jmp    start

;
; TURN ON COMPRESSED PRINT
;
compr: equ   $+destin
      mvi    a,esc
      call   lister
      mvi    a,comp
      call   lister
      jmp    start

;
; TURN ON EMPHASIZED PRINT
;
emp: equ     $+destin
      mvi    a,esc
      call   lister
      mvi    a,emph
      call   lister
      jmp    start

;
; TURN ON ITALIC PRINT
;
ita: equ     $+destin
      mvi    a,esc
      call   lister
      mvi    a,ital
      call   lister
      jmp    start

;
; OUTPUT TO PRINTER
;
lister: equ   $+destin
      push   h ; save all registers
      push   d
      push   b
      mov    e,a ; get character in E
      mvi    c,lstout; send character to list device
      call   bdos
      pop    b ; restore all registers
      pop    d
      pop    h
      ret

;
; CHARACTER OUTPUT TO CONSOLE
;
cchar: equ   $+destin
      push   h
      push   d
      push   b
      mov    e,a ; get character in E
      mvi    c,conout; send character to console
      call   bdos
      pop    b
      pop    d
      pop    h
      ret

```



```

; STRING OUTPUT TO CONSOLE
;
string: equ    $+destin
        push   h
        push   d
        push   b
        mvi    c,prints; send string to console
        call   bdos
        pop    b
        pop    d
        pop    h
        ret

; DELAY SUBROUTINE for error messages time on screen
;
delay: equ    $+destin
        push   h ; save all registers
        push   d
        push   b
        mvi    b,0ffh
del1: equ    $+destin
        dcr    b ;slow decrement
        jz     back ;return when this one is zero
        mvi    c,0ffh
del2: equ    $+destin
        dcr    c ;medium decrement
        jz     del1 ;back to slow when zero
        mvi    a,2 ;!!!! VARY THIS TO VARY DELAY !!!!
del3: equ    $+destin
        dcr    a ;fast decrement
        jnz    del3 ;loop until zero
        jz     del2 ;then back to medium
back: equ    $+destin
        pop    b ; restore all registers
        pop    d
        pop    h
        ret

; *****
; END OF SUBROUTINE AREA
; *****
; START OF DATA AREA
; *****
;
; DEFINE WORDS
;
lookup: equ    $+destin
        dw     FORM,LINE,PWRUP,EXP,COMPR,EMP,ITA

; DEFINE BYTES
;
; PROMPTS FOR 52 COL SCREEN - as a courtesy to Osborne 1 owners
; who are still bound
;
IF SMALL
prmt1: equ    $+destin
        db     '*****',cr,lf
        db     '* (1) FF (2) LF (3) Reset (4) Expand (5) Comp *',cr,lf
        db     '* (6) Emph (7) Ital +++ (^P) CONTINUE Print +++ *',cr,lf
        db     '** *****',cr
        db     '** YOUR CHOICE? : $'
;
prmt2: equ    $+destin
        db     cr,** YOUR CHOICE? :
        db     'How many feeds (1-9)? : ',bs,$'
;
error1: equ    $+destin
        db     cr,** YOUR CHOICE? :
        db     'numeric (1-7) or ^P only $'
;
error2: equ    $+destin
        db     cr,** YOUR CHOICE? :
        db     'Input must be numeric 1-9 $'
ENDIF

; PROMPTS FOR 80 COL SCREEN
;
IF NOT SMALL
prmt1: equ    $+destin
        db     '*****',cr,lf
        db     '* (1) Formfeed (2) Linefeed (3) Reset TOF '
        db     '(4) Expanded (5) Comp Print *',cr,lf
        db     '* (6) Emphasized (7) Italics '
        db     '+++ (^P) CONTINUE Print +++ *',cr,lf
        db     '*****',cr
        db     '***** YOUR CHOICE? : $'
;
prmt2: equ    $+destin
        db     cr,'***** YOUR CHOICE? : '
        db     'How many feeds (1-9)? : ',bs,$'
;
error1: equ    $+destin
        db     cr,'***** YOUR CHOICE? : '
        db     'numeric (1-7) or ^P only $'
;
error2: equ    $+destin
        db     cr,'***** YOUR CHOICE? : '
        db     'Input must be numeric 1-9 $'
ENDIF

; *****
; END OF DATA AREA
; *****
end ;end of SPRINT program

```

Figure 5. Listing for the SPRINT.OVR program.


```
.L70d ↪
070D NOP
070E NOP
070F C9
0710 NOP
0711 NOP
0712 C9
```

The last label from the list above, `PBGMEM:`, contains a 2 byte address beyond which you can add a good amount of code without adversely affecting WordStar's normal operation, provided you add to this two-byte address an

The code to be inserted in the MORPAT: area is designed to open, read in and execute the SPRINT.OVR overlay file, then tidy up before returning to

Each time you send a document off to the printer, SPRINT will present you with a menu of possible print commands.

At this point, you should make a working copy of WordStar for the purposes of making the modifications that follow. That way if you make errors, nothing is permanently lost. First, install this copy of WordStar in a manner to

Take a look at the source code for the `SPRINT.OVR` program (figure 5). The program places a menu at the top of your screen, prompts you for one or more inputs, and will be cleared from the screen when you enter `^P`. The comments help to explain the program's operation.

Also take special note of the offset value equate. It must be equal to the PBGMEM: value for your version of WordStar (in parentheses to the right of the PBGMEM: addresses above). When

Figure 6. Code to be read into WordStar's patch (MORPAT:) area.

[illegible]

VERSION		
2.26	3.0X	3.3X
-a70d ↵	-a711 ↵	-a711 ↵
070d JMP 2DE ↵	0711 JMP 2DE ↵	0711 JMP 2BB ↵
0714 JMP 2DE ↵	0714 JMP 2DE ↵	0714 JMP 2BB ↵
0717 ↵	0717 ↵	0717 ↵
-	-	-

Example 1. *Placing the JMP instructions for SPRINT.*

SPRINT is called by the code contained in the MORPAT: area, it will load beginning at the PBGMEM: address. If the offset equate is incorrectly set at the time of assembly, the address references within SPRINT will be incorrect and the program will surely bomb.

Assemble the program as:

A>ASM SPRINT ↵

Then load the program:

A>LOAD SPRINT ↵

Just like baking Toll House cookies, "Set mixture aside temporarily." Actually, this is sort of the point of no return. If you are timid or otherwise just want to leave your WordStar alone, SPRINT will function quite well as a ".COM" file. Simply change the value of the label destin: to 0100h. As a matter of fact, you probably should try this before proceeding anyway, so you can be sure the program works properly and does not contain errors passed by the assembler.

If you have decided to proceed, change the value of the label destin: back to the two byte PBGMEM: value required for your version of WordStar (the number in parentheses at the beginning of the article). Re-assemble and load SPRINT, then rename the resulting ".COM" file as follows:

A>REN SPRINT.OVR=SPRINT.COM ↵

Now you must now ready the code which will be read into the MORPAT: area

(figure 6).

This code must be assembled and overlayed permanently into WordStar. To do so, simply perform the following procedure:

A>ASM WSINTERN ↵

This assembles the code; the follow-

VERSION		
2.26	3.0X	3.3X
-s35C ↵	-s35C ↵	-s34B ↵
035C 21 21 ↵	035C 49 49 ↵	034B 6D 6D ↵
035D 73 78 ↵	035D 78 7D ↵	034C 84 89 ↵
035E . ↵	035E . ↵	034D . ↵
-60 ↵	-60 ↵	-60 ↵
A>		

Example 2. *Changing the PBGMEM: value for SPRINT.*

ing loads WS.COM with DDT.COM:

A>DDT WS.COM ↵
DDT VERS 2.2
NEXT PC
4600 0100
-IWSINTERN.HEX ↵

This puts WSINTERN.HEX into the File Control Block. The following reads WSINTERN.HEX into position:

-R ↵
-

While still in DDT.COM, the last task is to place the JMP (Jump) instructions

for labels PRINIT: and PRFINI: and add the proper number of bytes to PBGMEM:. In both cases, the JMPs will be to the start of the MORPAT: area for your version of WordStar.

Example 1 shows how you place the JMP instructions for each version of WordStar. You can then change the PBGMEM: value as shown in Example 2.

You should now be back at your CP/M system prompt. You will type the following (use the appropriate disk drive for d:, and read on for the correct values for xx):

A>SAVE xx d:WS.COM ↵

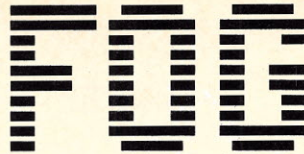
For version 3.3, the amount xx to use with SAVE is 69. For versions 2.26 and 3.0, use 63 and 62 respectively.

Save WS.COM now.

To put SPRINT to the acid test, make sure you have WS.COM, WSOVLY1.OVR, WSMGS.OVR and

SPRINT.OVR on one disk. Ready your printer, and attempt to print a text or document file of one kind or another. You should see something similar to figures 1 and 2 depending on whether you print from the no file menu or from within a file while editing.

As always, I consider myself responsible for the content of this article and am prepared to help those who run into trouble in following my directions or because of errors which may have crept in somewhere. Address correspondence to D. M. HURST, HQ Co, 7th CommBn, 3d MARDIV, FPO San Francisco 96602.



The **FIRST OSBORNE GROUP (FOG)** has been formed as a User's Group for persons using or interested in portable computers and/or the CP/M disk operating system with related software. In December of 1984, there were over 15,000 members from around the world. Most attend local group meetings at over 300 locations.

Computer systems owned or used by members include the Osborne 1 (single and double density), the Osborne Executive 1, all models of the Morrow MicroDecision, the Zorba, all models of the KayPro, several MicroMates, and many more. Special interest groups organized to augment a network of local group meetings include dBase II, Ham radio operators, Personal Pearl.

FOG was started in October of 1981 by a small band of early buyers of the Osborne 1. The primary purpose was to organize a library of public domain software to run on the Osborne 1. A newsletter was quickly started to act as a focal point for the group's activities. The large number of excellent contributions to both the library and the newsletter has produced a library of 230 disks (as of December, 1984) and a nicely typeset (70 or more pages) monthly publication. All back issues of the **FOGHORN** are available for a nominal fee which includes shipping in the U.S. Contributions are currently being solicited for bulletin board systems in addition to the thirty currently in operation. Most systems accept both 300 baud and 1200 baud. Phone numbers for the first systems are:

System #1 — Daly City, CA	(415) 755-2030	24hrs/7 days
System #2 — Vancouver, BC	(604) 596-0314	24hrs/7 days
System #3 — Daly City, CA	(415) 992-8542	24hrs/7 days

Each of these systems will have a file listing phone numbers for the other systems.

While the meetings are organized on a local basis, over 130 of these local groups have joined the FOG network, thus increasing the sharing of information, tips, problems and so on. Those local groups which opt to formally join the FOG network receive a portion of local member dues to assist with the cost of maintaining a local copy of the disk library.

The FOG library is currently maintained on the Osborne 1 single density format but separate libraries are being established for the other computer formats. The library files are carefully screened and divided into category types (utilities, games, applications, and computer languages are the four major categories). Programs which contain run or other errors are put into the hacker section so interested members can fix them and resubmit for inclusion in the correct section. Items which do not fit into one of these categories are in the miscellaneous section. A catalog and descriptions of all the discs is maintained in the library section.

Dues in FOG are \$24.00 per year. This entitles each member to a copy of the **FOGHORN** each month as well as access to the disk library. Local group meetings are open to the public without charge although access to the disk library is restricted to the membership. The FOG library contains only public domain software. Piracy (the copying of proprietary software) is strongly condemned.

In the United States, the **FOGHORN** is normally mailed by non-profit bulk mail. (FOG is a corporation in the state of California and has obtained its non-profit, tax exempt status from both the state and federal governments.) For those members who live out of the country or who prefer first class delivery of their **FOGHORN**, additional postage must be added to the annual dues. See the chart below for details.

If you are interested in joining a self-help organization to increase you knowledge and the use of your computer, use the application below (or a copy of it). Generally, memberships received at the FOG office prior to the 15th of the month are entered in time to receive the next month's **FOGHORN**.

If you know of a local group which might be interested in joining the FOG network, please send all details (meeting dates and places, officers, and how interested local computer owners can join). We will send you an information packet on becoming an Affiliated Member Organization.

For your records, the address of FOG is P. O. Box 3474, Daly City, CA, 94015-0474. Please allow at least two months for the arrival of your first **FOGHORN** since bulk mail can take as much as nine weeks. (The post office says that it should only take about three weeks for non-profit bulk mail but some members on the East Coast have experienced longer delays.) A membership card will be processed within two weeks of the receipt of your dues.

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INTERESTS? _____

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Daly City, CA 94015-0474
United States of America
Phone: (415) 755-4140

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New Products

Double-Sided Drives For Executives & Other New Products

Information about new products is derived from press releases sent to the Editors of The Portable Companion by companies announcing their products. Statements, claims or opinion expressed in this section are those of the announcing companies, not the Editors. The Editors are not able to check these statements or claims for accuracy, nor have we evaluated these products.

If you have trouble contacting one of these companies, or if a product announced here is not available, keep the Editors informed by writing them at The Portable Companion, P.O. Box 5245, Redwood City, CA 94063.

Double-Sided Drives For Executives

Future Systems announces a double-sided drive upgrade for the Osborne Executive computer. Brand new double-sided Executives are available as well as upgrade installations on the Executive you already own.

The upgrade doubles the Executive's disk storage capability to 390K per disk. Future Systems claims a significantly faster track-to-track access speed while maintaining complete capability with existing Osborne approved software. The system is also data compatible with the Osborne 1 and the new Vixen.

Future Systems' upgrade is an

Osborne-approved product which includes two new Okidata drives, ROM and controller chips, utility program disk and a nine month drive hardware warranty.

The new double-sided Executive sells for \$1450.00 plus shipping and handling.

The Executive double-sided upgrade is installed for \$595.00 plus shipping on systems sent to Future Systems. (It is also available through selected dealers - prices may vary.)

A one drive upgrade (to restore the original disk storage space to internal hard disk owners) is installed for \$450.00 plus shipping.

For more information, contact:

Future Systems
828 Nob Hill Avenue
Pinole, CA 94564
(415) 724-3868

Finding Things

Osborne users can now retrieve information from computer files even if they don't know where the information is.

Electra-Find retrieves all sentences or paragraphs on a specific topic. You can search for any word or phrase. Each sentence is retrieved along with its file name and location. Results can be

saved in a new file or added to an existing file.

All types of files can be searched, including data-base and word processing files. You don't have to change or index files to search them.

You can select different types of searches and output formats from a menu and you can limit searches to selected file types by using wildcards.

Electra-Find runs on all Osborne computers as well as on Kaypro, Morrow, Epson, and other CP/M computers. Cost is \$50 plus tax and shipping.

For more information contact:

O'Neill Software
Box 26111
San Francisco, CA 94126
(415) 398-2255

Writer's Toolbox

Pro/Tem Software announced Footnote and Bibliography. Footnote numbers and formats footnotes or endnotes in WordStar or NewWord text files, and numbers cross references.

You type your document as usual. Wherever you want to put a footnote reference, type a @ (or other symbol of your choice). Enter the text of the footnotes after the paragraphs, at the end of the document, or in any other convenient place. If you ordinarily prepare footnotes after completing the text, you

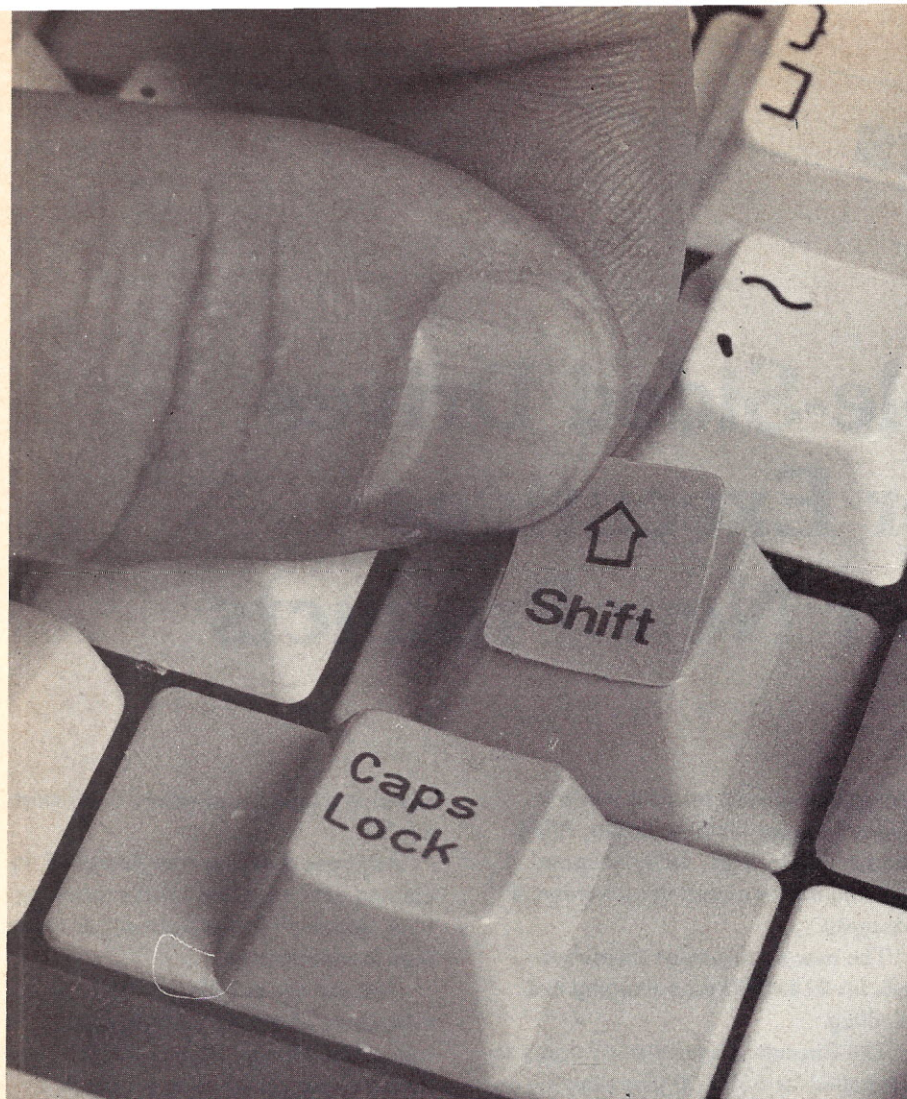


Photo by Paul Winternitz

can also enter them into a separate file.

After saving the file, run Footnote. It will number the references and notes consecutively, placing the footnotes at the bottom of the appropriate page, or move them from the manuscript to a separate endnote file. If a footnote is too long to fit on one page, Footnote will carry it over onto the footnote region of the next page.

Footnote produces a standard WordStar file with the footnotes properly numbered and formatted. You can edit, add, modify or delete text and footnotes, and then run Footnote again. It will renumber and reformat the manuscript. It will operate on a file up to 200 pages long with up to 500 notes.

Included with Footnote is Pair, a program which checks that print commands, quotation marks, parentheses and brackets have been properly closed.

Bibliography compares citations in your manuscript with entries in a mas-

ter bibliography file and constructs a bibliography of all entries cited.

To use Bibliography, you enter books and articles into a master file, either with your word processor or with Pro/Tem's Notebook (database manager). When you prepare a manuscript, enter citations in your usual form and precede each citation with a percent sign. Then run Bibliography. It will compare the citations in your manuscript with the entries in your master file, automatically construct a bibliography of all the works that have been cited, and then print the bibliography to a disk file, so you can incorporate it into your manuscript.

You can create the bibliography in alphabetical order, or in order of citation, with the entries numbered or not. You can include or exclude keynames, annotation, and other items. Bibliography can also modify your manuscript. It can remove the percent sign preceding the citations, copy entries from the master

bibliography into footnotes in the manuscript, or replace citations in the manuscript with numbers corresponding to their number in the bibliography.

Footnote, Pair and Bibliography run on all Osborne and CP/M computers and also under MS/PC-DOS, MP/M and CP/M-86. Bibliography is compatible with most word processors and is priced at \$99.00. Footnote (including Pair) is priced at \$99.00. All run independently of WordStar and do not require modifying the word processor.

For more information contact:

Pro/Tem Software
2363 Boulevard Circle
Walnut Creek, CA 94595
(800) 826-2222

Keyboard Decals

Aspen Graphics-Overlay division has introduced a new line of keyboard decals. Data-Cals lets you change nomenclature to meet a specific job function, to meet software program requirements, or to remove present names with colored matched blanks. Data-Cals are ideal for foreign language translations. They help remove any doubt of key selection during learning, a change-over period, as well as helping to break bad habits.

They come in two formats: opaque for changing or covering up, and transparent for adding information to existing keys. They come in different colors, made of durable Lexan material, so that you can't feel them on the keyboard, and custom sized for top and front of existing keys. They can be removed.

For more information, contact:

Aspen Graphics-Overlay Division
1032 West 23rd Street
Tempe, AZ 85282
(602) 829-8443

Numbering Lines

Pro/Tem Software announced Number, an outline program which helps with reports, contracts, legal documents and other documents. Number works with most word processors to number paragraphs, sections or other items in a document. You can edit the document

as often as you need. Add or remove items, and Number will renumber them consecutively. It also automatically numbers cross-references.

You can choose from seven different numbering styles including letters, outline, and multi-decimal. Number can surround the numbers with parentheses or square brackets, or follow them with a period, close parentheses, or colon.

It can number arabic numbers up to 500; roman numerals up to CCCXCIX (399); letters up to the fifth set (aaaaa, bbbbb); cardinal and ordinal numbers up to 99, and do up to five outline levels. Number is compatible with most word processors.

Number runs under MS/PC-DOS, CP/M, and CP/M-86, and is priced at \$99.00. For more information contact:

Pro/Tem Software
2363 Boulevard Circle
Walnut Creek, CA 94595
(800) 826-2222

New Uniform

Micro Solutions, Inc. announces the release of version 3.0 of UniForm, a utility that lets you directly read and write disks from different CP/M computers, and format disks for those machines. Enhancements over earlier releases include expanded user prompts and compatibility with more than 80 computers — over twice as many as the previous version.

UniForm also lets you transfer files between CP/M and PC/MS-DOS computers as well as TRS-DOS (Tandy/Radio Shack). You can transfer any file, including ones containing text, binary data or program code, between CP/M and PC-DOS or MS-DOS. In addition, most versions provide TRS-DOS/LDOS to CP/M file copy functions. Programs such as word processors, spreadsheets, and database managers are unchanged by UniForm.

UniForm works by transforming one floppy disk drive into your choice of disk format. The program is menu-driven and provides warning messages for invalid commands and conditions and inconsistent formats. When it finds an error, it beeps, as well as giving you an error message on the status line.

A wide variety of disk formats and sizes are supported by the program, including 96 TPI or 48 TPI disk drives. During disk formatting, the program automatically checks the integrity of each disk track and displays the number of bad tracks, if any.

UniForm's price is \$69.95. It requires two floppy disk drives, or one floppy disk and one hard disk. There are versions available for many CP/M computers as well as on the IBM PC, PC-XT, and PC-AT.

For more information, contact:

Micro Solutions
125 South Fourth Street,
De Kalb, IL. 60115
(815) 756-3411.

Poor Person's Desk Accessory Utility

Poor Person Software introduces a "desk accessory utility" for CP/M systems called Write-Hand-Man. With it you can suspend any CP/M application program and execute accessory programs ranging from communications to mini-databases. The application program is unaffected — Write-Hand-Man gives the illusion of concurrent execution.

Write-Hand-Man is distributed with six accessories: notepad, phonebook, desk calendar, file and directory viewing programs and a communication program. New accessories can be added by any user familiar with CP/M programming techniques, and new accessories may be developed by Poor Person Software.

Write-Hand-Man is priced at \$49.95. For more information contact:

Poor Person Software
3721 Starr King Circle
Palo Alto, CA 94306
415-493-3735

An Envoy For Your Modem

Envoy is a full featured, menu-driven, communications software package that allows easy access to CompuServe, The Source, Dow Jones news retrieval, local bulletin boards, electronic mail

and timesharing services. It has a terminal mode with memory capture buffer, so that you can save what happens on the screen in a disk file. It also has user-definable Autodial and Autologin menus.

Envoy uses both the XMODEM and ANSI standard X3.28 file transfer protocols, which give you error-free transfers of both text and binary files. It has a utilities menu which lets you do single stroke file copying, typing, printing, erasing or renaming. MS-DOS users can display, create, remove or transverse subdirectories as well. Envoy also gives you remote access to your utilities menu. It uses only 7K to 9K bytes of disk space, and comes with a 30 day money back guarantee.

For more information, contact:

Artisoft, Inc.
2450 E. Speedway, Suite 4
Tucson, AZ 85719
(602) 327-4305

Terminal Emulation

Mycroft Labs offers a Terminal Emulation Module for its MITE data communication series called MITE+. This module provides a complete set of terminal emulations in a communications package. The MITE+ module enables a computer to emulate approximately ninety-four terminals. The module presents a list of terminals to emulate. You select one and then exit to the MITE main menu and start the log-on procedure.

You can save the terminal emulation selection, phone numbers, baud rates, etc. for future recall. MITE+ is available for Osborne computers and other CP/M computers as well as PC/MS-DOS computers.

For more information contact:

Mycroft Labs
P.O. Box 6045
Tallahassee, FL 32314
(904) 385-1141

Symbolic Debugger

DSD80 by Soft Advances is a full screen symbolic debugging program. The dynamic display has instruction,

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2363 Boulevard Circle, Walnut Creek,
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*You can also maintain the master bibliography with Notebook I or II, Pro/Tem's database manager for unlimited text.

All programs run under MS/PCDOS, CP/M, and CP/M-86. Footnote is compatible with NewWord®. Bibliography and Number are compatible with most other word processors as well.

register, stack and two memory windows. Full DDT compatibility means not having to learn new names for old commands.

Other DSD80 functions include commands for port I/O, string searching and defining symbols. Single keystroke control commands perform functions like single stepping and scrolling displays. A software In-Circuit-Emulator protects against program crashes with write protected memory, execute only code and stack overflow protection. The Z80 instruction set is fully supported using either Intel or Zilog mnemonics. DSD80 has on line help and comes with a fifty page users manual. It costs \$125 plus shipping.

For more information, contact:

Soft Advances
P.O. Box 49473
Austin, TX 78765
(512) 478-4763

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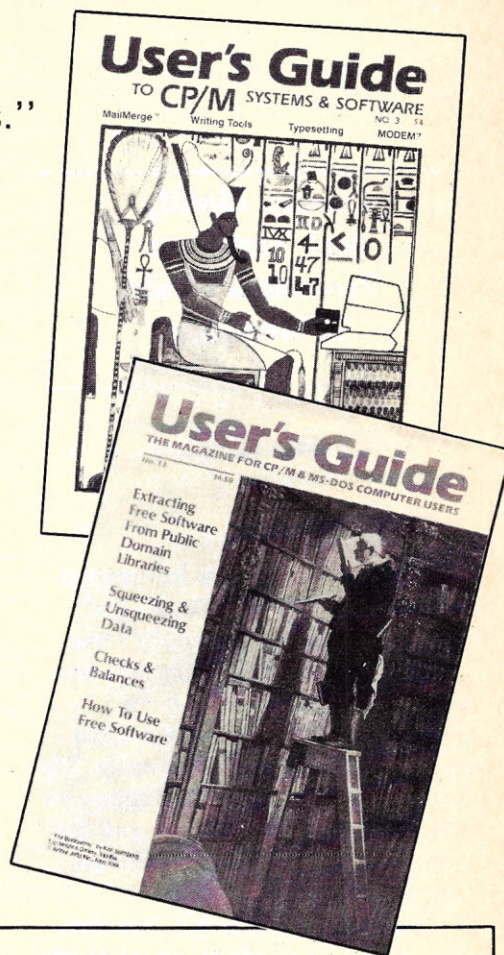
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User Groups

Create, Modify and Test Your Programs While in WordStar

John Gaudio

WordStar is ideal for creating and editing MBASIC and dBASE II programs, especially when you find yourself making changes, testing your program, making more changes, testing your program again, and continuing to repeat the cycle. The R command from WordStar's editing no file menu makes this process easy. Use it to run a program without ever quitting WordStar.

The procedure is simple. You start by setting up a couple of special double density disks (if you don't have double density you should get it, but the R command does allow you to change disks, so the basic ideas covered later in this article still apply). Make two copies of your standard double density WordStar disk, then remove files like INSTALL.COM, WINSTALL.COM, and SAMPLE.TXT. Keep only files actually needed to run WordStar. Use a program like PIP, NSWEEP, or the Copy option in WordStar to move MBASIC to one of these disks, and to move all files starting with the letters DB from your dBASE II disk to the other copy of WordStar. You now have two special purpose disks. One for developing MBASIC programs, the other for developing dBASE II programs.

Assume we're writing a program in

MBASIC. Of course, it could be written from inside MBASIC, but MBASIC's editing ability is nothing compared to WordStar's. Create a non-document file by using the N command, be sure you specify a name with the ".BAS" extension, and then go to work.

I constantly find myself using parts of one program as a starting point to build another. The ^KR option (Read a File) is great for this. I also find the ^KC option useful for copying short blocks of code from one part of a program to another. It's then easy to make minor changes to the new block using some of the other WordStar commands.

When you think the program's ready, simply use the ^KD command to save your file. Then use the R command to Run a program. When WordStar asks for the "command" you respond with:

MBASIC FILE ␣

— where FILE is the name of the program you've been working on. MBASIC comes up running your program. You test it, make minor changes from inside MBASIC if you wish, and when you're done (remember you must save any minor changes you want to keep), simply type SYSTEM and MBASIC will send you back into WordStar. Remember that you must use the A option with MBASIC's SAVE command or you won't be able to edit your file with WordStar. Enter the SAVE command as:

SAVE 'FILE.BAS', A ␣

— where, again, FILE is the name of your program. If you then wish to make more changes using WordStar, you'll once again want to use the N command from the editing no file menu. This time, when you're asked for the file name, re-

spond with ^R to let WordStar recall the name you used last. From here the process repeats.

When doing this with MBASIC, it's no problem to change the logged disk drive to B as we so commonly do. But when working with dBASE II, you'll want to either leave the logged drive as A, or make sure you change it back to A before using the R command and running dBASE. If you try running dBASE while logged onto the B drive and with the dBASE files on A, you're going to run into a problem.

Don't forget to use a ".CMD" extension in your file name when creating dBASE command files under CP/M. If you're running under MS-DOS, dBASE uses the ".PRG" extension. One more thing, it seems that the dBASE MODIFY command handles lines over 80 characters in length by cutting them down to 79 or 80 characters. Therefore, if you want to be able to use the dBASE II editor (MODIFY COMMAND) on a file you built in WordStar, you'll want to make sure to keep the line length to under 80 characters.

Finally, something you may notice when running either dBASE or MBASIC from the WordStar R option is that your left arrow key doesn't always work. The problem is that you're running these programs with arrow keys set for WordStar. One way to fix this is by using ^H in place of the left arrow key, but a much better way is to use something like MANYKEY from CompuMagic. This super program allows the arrow and function keys to be changed automatically when running another program from WordStar, and makes it easy to change them back when returning to WordStar.

Except for real quickies (10 lines or less), I almost always use WordStar to create programs for dBASE and



MBASIC, and the idea can be carried further with other languages. Give it a try, I think you'll like it.

This article is copyrighted © 1985 by J. Gaudio Company, and was reprinted, with the author's permission, from Issue #5 of the SURVIVOR'S GUIDE. Annual subscriptions to the SURVIVOR'S GUIDE are \$12.00. For more information, telephone the SURVIVOR'S GUIDE at (303) 934-1407.

Review of the dBASE V2.41 Upgrade

Gary Shaner

Ashton-Tate issued version 2.41 of dBASE II in February, 1984. The upgrade package (2.3b to 2.41) sells for \$75. Included in the package is a new disk for dBASE II, a disk of utility

programs which have been added, and a new loose leaf manual without a binder. To obtain complete information on the update, drop a card to Ashton-Tate (9929 W. Jefferson Blvd., Culver City, CA 90230).

dBASE II has been consolidated into three files, DBASE.COM, DBASE.OVR and a new Help capability. The Help function displays on-screen information for commands, similar to SuperCalc. One difference is the Help file is in ASCII format. It can be changed to include your own help messages. This can be useful with command files that are run by someone else. The Help file can also be eliminated completely so that DBASE.COM and the overlays require only 60K of disk space.

Several changes in the upgrade were corrections of problems in V2.3. MODIFY COMMAND does not corrupt the files. Random corruption of the data files during file modification or movement has been improved, but not eliminated. Other improvements relate to problems encountered when commands are aborted.

Experienced users will find new ca-

pabilities to be valuable. The BROWSE command will now permit a field specification. Only the fields specified are displayed. This is useful to eliminate constant scrolling when you need to work with the first and last field of a long record.

Memory files now require only 1K disk space. Saving memory variables permits specific variables instead of the entire memory. Restoring memory permits an additive option so the disk file can be added to the current memory instead of replacing it completely. These options provide a means to work around the 64 variable limit in long programs.

GET statements with a Picture phrase now use a floating decimal point as in Append. This eliminates entry errors when you forget to jump over the decimal point in the picture format.

TOTAL yields the correct answer when totaling to a file with a wider field than the source.

UPDATE includes a random record option so the file does not have to be sorted or indexed when updating.

Three new utility programs have

been included with V2.41. DGEN.CMD is a program writer package. Those who have not mastered command files will find this utility helpful for generating and maintaining a new file, creating reports from the file, for creating a mailing label program, and for generating command file menus. The programs are written for an 80 column display. Experienced programmers will not find much use for this utility program package.

The best program in the package is dSORT, a separate ".COM" file for rapid file sorting. The program permits simultaneous sorting on multiple fields. Files containing upper and lower case characters can be forced to all capital order. This program is fast. A 25K file of 800 addresses was sorted on three fields in 25 seconds.

INSTALL.COM is the third utility program. It permits adapting default values to the requirements of your computer.

The update does include a few problems. The program is written for an 80 column display. On a 52 column machine the scrolling can sometimes be a nuisance. Command files written for the 52 column display work fine.

The browse command on an indexed file will change the record pointer for every record modified. The record is moved to the last record for the index key. This can be a real nuisance if several changes must be made. Ashton-Tate is aware of the problem, but as yet has not distributed a patch to correct it.

dSORT does not work in the distribution form. It starts to run and then displays a "see your dealer" error message. After two letters and six weeks a patch was supplied that corrected the problem.

Frequent dBASE users will find the update well worth the \$75 cost. Occasional users who do not write their own command files would not find much difference in the program operation. The occasional user will find the programming utilities helpful.

Many of the corrections were for minor problems which occur only under specific situations. In many cases I had never encountered the problem which was corrected. The update information from Ashton-Tate details all the changes

if you are concerned about a specific problem.

Reprinted from *FOGHORN* Vol. IV, No. 3 (December 1984).

Review of WordStar Professional Package

David Wright

I purchased the WordStar Professional package that MicroPro offered as a promotion to Osborne 1 owners (MicroPro International, 33 San Pablo Ave., San Rafael, CA 94903; phone 415-499-1200).

This package contains an update to WordStar/MailMerge (to level 3.3), SpellStar and StarIndex. All Osborne owners know of the tremendous capabilities of WordStar/MailMerge. This is an evaluation of the other two modules of the package.

When I tried out MicroPro's SpellStar, I was disappointed. SpellStar is made up of two operations — spelling check and dictionary maintenance. My disappointment is with the spelling check operation. This operation is made up of two sub operations, "check Spelling" and "list the misspelled words".

First the Check Spelling allows you to verify/change the user selectable controls and then performs the proof-reading phase. At the conclusion of this phase, the statistics of the input file are displayed and you can choose to review the misspelled words, abandon the check, or continue to flag the errors in the input file.

Once the flags have been inserted, you can choose to restart the program or to continue with the check phase. The correction phase merely displays the text and allows you to trace through the flagged words. At each of these you have the opportunity of bypassing the word (leaving it flagged), ignoring the

word, marking it for adding to a dictionary, or correcting the word. The documentation states that the words are flagged with @, but the display shows ^@ which I haven't been able to use with the ^QF or ^QA commands. This means that if you have many words flagged and wish to remove the flags, you must do it by going through the correcting phase and I(gnoring) all the flags — one by one. If you don't know the correct spelling, you must look it up in a (hardcopy) dictionary.

In comparison, The Word Plus (Oasis Systems, 2765 Reynard Way, San Diego, CA 92103) is a group of modular programs that you can use as a spelling check "system" or as individually callable modules — a neat feature. TW contains not only the basic operations provided by SpellStar, it contains HY-PHEN which provides help in hyphenating words, LOOKUP which lets you look words up in the 45,000 word dictionary (you can enter an approximation and LOOKUP will give a list of likely candidates), ANAGRAM and FIND which help with word puzzles, WORD COUNT, HOMONYM HELP and WORD FREQUENCY which are self-explanatory. TW lets you choose the flagging character and you can use ^QF and ^QA functions in WordStar on a file so marked.

What makes TW far different from SS is that when you get to the place where you list the misspelled words, you correct them at that time and the next correction phase automatically corrects all occurrences of the words in the input file. What is important (to me, at least) is that when you are in the correction phase, there is the facility to view the word in context and/or perform a dictionary lookup for likely candidates to replace the misspelled word. Note that the TW dictionary is much larger than the SS dictionary (20,000 words).

As for StarIndex, this is a great program for automatically preparing a table of contents and an index. The only fault found is that in the implementation MicroPro used ^PP to mark words/phrases already in the text to appear as general index entries. As you avid readers of *FOGHORN* know, this is the same command used in WS for the

proportional spacing toggle. Thus you cannot use proportional spacing in a document in which you wish to use the facilities of StarIndex. To do so will cause text marked for proportional spacing to appear in the index. In addition, StarIndex will remove the ^P indicators from the file. A patch for this can be made:

```
A>DDT B:STARINDEX.COM
```

(Be sure to use a copy of
STARINDEX.COM in B:)

```
DDT VERS 2.2
```

```
NEXT PC
```

```
8700 0100
```

```
-S29E4 ← (Set location 29E4)
```

```
29E4 10 1B ← (Change to 1B)
```

```
29E5 CA ← (Enter period to  
get DDT prompt)
```

```
-^C ← (Enter Control-C  
to exit DDT.)
```

```
A>SAVE 136 B:STARINDEX.COM
```

This will change the StarIndex ^PP command to ^PESC (Control-P ESCape) so that proportional spacing can now be used in your document. The characters surrounding the general index entry will now look like ^[. Since this is not an interactive program, I would assume that the same patch would work on the Executive version of StarIndex.

Some readers have commented about the "undocumented" patching feature in WordStar 3.3. If the upgrade was purchased from MicroPro, the Installation Manual provided has a section, way at the back, called "OSBORNE USERS READ THIS FIRST" and the last item on the last page of this appendix explains how to access this patcher.

Sleuthing COMM-PAC Modem Operation

Jim Enright

I would like to share with anyone interested in generating object code for the COMM-PAC modem some necessary knowledge for this purpose.

1. Pin 9 (Ring Indicator) on the Osborne 1 modem connector is not connected in the modem.

2. Pin 8 (Modem Control Bit) and pin 4 (Modem Status Bit) are the only control pins that have a function with the COMM-PAC modem.

3. Pin 8 is connected directly to the "RTS" (Request To Send) pin on the MC6850 ACIA chip in the Osborne. When this pin is low (the active state), a relay is activated in the modem to connect the phone line. This same relay is used to do the pulse dialing.

4. Pin 4 functions as a "Ring Indicator" and as a "Carrier Detector". The signal on the pin is inverted, level shifted and then connected to the "DCD" (Data Carrier Detect) pin on the 6850. When a ring or a carrier is detected on the phone line the 6850 pin goes to a low state.

5. If the line is not connected (RTS high) and a ring is detected before answering, the modem comes on in the "Answer Mode" when the line is connected (RTS low).

6. If the line is connected prior to a ring the modem comes on in the originate mode.

Armed with this information one can write the following rules about the COMM-PAC modem when it is used with the Osborne 1:

ORIGINATE MODE to bring up the modem in the originate mode:

1. Bring RTS low to connect line.
2. Monitor DCD for loss of carrier during communications.

ANSWER MODE to connect the modem in the answer mode:

1. Monitor DCD for a ring detection.
2. Wait for first ring to stop.
3. Bring RTS low to connect line.
4. Monitor DCD for loss of carrier during communications.

DIALING to dial a number:

1. Connect modem in originate mode.
2. Bring RTS from low to high and back to low the correct number of times for each digit.
3. Perform step 2 at a 10 pulse/second rate.
4. Wait one second between each

digit.

The information presented here was obtained by observing the Osborne 1 schematics, observing results during operation under the AMCALL communications program, opening the modem and peering inside, measuring the voltages on the connector pins during operation and obtaining brief information about the integrated circuits therein.

I have not been able to obtain a schematic of the modem itself. I believe the information to be correct, but it may be in error because of insufficient data. The most likely error would be in the way the modem determines whether it should operate in the originate or answer mode. I did not actually measure the mark/space frequencies when testing the modem. The modem may determine its mode from the carrier frequency sent by the remote terminal. If this is true, the rules for programming it will not change, however.

Reprinted from *FOGHORN* Vol. III, No. 11 (August 1984).

User Group Announcements

This section contains announcements of new user groups and special activities of existing user groups.

Covering (All Data) BASES

BASES, a new data base applications-oriented user group has formed in San Francisco. BASES provides a public domain data base exchange service, a monthly newsletter, and plans other educational programs designed to help micro users explore the untapped power of a data base program for a \$30 annual subscription and membership fee.

"Most data base programs store information in common formats that can be used by other programs on different microcomputers," according to BASES founder Darrell Bross. "If you input a

30K data base, you will be able to copy three data bases of your choice from the BASES public domain library, and BASES will provide whatever format translation is necessary. For example, an R:Base data base created on an IBM-PC can be transferred to an Osborne using dBASE II."

The monthly newsletter will provide product reviews and columns about various data base products. The group will also set up a forum for subscribers to ask technical questions which will receive immediate attention rather than having to wait for the newsletter.

Bross has found that "most classes spend the majority of their time on the basics of how to create a data base, or the opposite extreme of explaining neat little tricks to make the program run faster or get around the inherent bugs in the software. This leaves a huge gap of people who may not get beyond the mailing label stage. You'll get more useful information in five minutes at a user group meeting than anywhere else, so we decided to translate that experience into a more focused, personal, networking environment of 10-12 people meeting in someone's home."

For more information, contact:

BASES
254 Winding Way
San Francisco, Ca 94112
(415) 586-5788

NBFOG News

NBFOG News lists meeting times and locations for the NorthBay First Osborne Group (FOG AMO #56). Two membership plans are available: for \$20 membership in NorthBay FOG, you get the NBFOG news (1-3 page newsletter) and library disk copying privileges, or for \$38 membership in both NorthBay FOG and FOG, you get the additional benefits of a subscription to the monthly FOGHORN and a FOG membership card. Send a SASE for information (no phone calls, please) to:

NBFOG
c/o Isaac Fluss
750 Mendocino Ave., Suite 1
Santa Rosa, CA 95401-4881

For more information on FOG or FOGHORN, see the FOG ad in this issue or write to:

FOG
P.O. Box 3474
Daly City, CA 94015-0474

OUCH!

Ouch offers help! Osborne Users Club Houston maintains an organized public domain library, regular meetings, copy parties, as well as RCPM and BBS support. All Ozzies are welcome as are any who can read our formats. We offer assistance to individuals and clubs interested in micros. Meetings are held on the third of each month at 7:30 at U. of Houston. Affiliation with FOG and CPMH. Send a SASE to:

OUCH
P.O. Box 500343
Houston, TX 77250-0343
data phone (713) 488-5619

TOG + SKOG = TOGGLE

TOGGLE is the monthly newsletter of the Tacoma Osborne Group (TOG) and the South King County Osborne Group (SKOG). TOG is FOG AMO #72 and SKOG is FOG AMO #99, which means members of either local group are also FOG members. For SKOG membership information and meeting times and locations, as well as TOG and North Seattle Osborne Group membership and meeting information, send a SASE to:

Tacoma Osborne Group
1808 Lenore Drive
Tacoma, WA 98406

QCOG

QCOG is the Quad City Osborne Group, publishing Q BITS monthly newsletter. As QCOG is an Affiliated Member Organization (AMO) of FOG, each QCOG member is also a FOG member, and receives the FOGHORN (FOG monthly newsletter of over 60 pages) and access to the FOG public domain library as well for \$30 annual

membership fee. Send a SASE to:
QCOG
c/o Lay and Company
P.O. Box 2456
Davenport, IA 52809
(319) 386-3484

AOG

Albuquerque Osborne Group, another FOG AMO, meets monthly. For \$36 annual fee you get dual membership in AOG and FOG. You get FOGHORN, the AOG News, and access to the 11 megabytes of public domain software in the FOG library. For meeting locations and membership information, send a SASE to:

Albuquerque Osborne Group
P.O. Box 37199
Albuquerque, NM 87176

CFOG

CFOG is Chicago's First Osborne Group, publishing PIP, a monthly newsletter. Meetings are held at 1pm on the last Sunday of each month at Triton College in River Grove, usually in the liberal arts building. For membership information and applications, send a SASE to:

CFOG
Tom Ferguson
216 Coe Road
Clarendon Hills, IL 60514
(312) 654-0986

User Group Listings

Help us help you find new members. *The Portable Companion* will provide user group listings (for non-profit groups) on a space available basis. If we are not receiving your newsletter, please add us to your list. Send the newsletters and listings to:

Portable Companion
P.O. Box 5384
Redwood City, CA 94063

for its demise, what has happened to this philosophy?

The Portable Companion has returned, but what used to be an 80-page magazine has been reduced to a 60-page magazine, and what used to be a monthly magazine has been reduced to a bi-monthly one. You don't need a computer to figure out that the philosophy of value for the money seems to have gone astray. A quick calculation tells me that the *Companion* has gone from about 2.6 cents a page to almost 7 cents a page!

The reason I am doubly concerned about this is because I am, as I am sure many other readers are, "hooked." You're in a position to ask almost any price and still count on a reasonable number of *Portable Companion* "junkies" like myself to pay it, but our faith and trust in OCC has been tarnished.

Also, my original subscription to the *Companion* would have expired this month. The last issue was in October of 1983, or 8 months premature. I heard a rumor at a recent meeting of my Osborne users group that previous subscribers would get 2 more issues, regardless of the actual expiration date of the original subscription. To date, I have only received the April/May '84 issue and am beginning to wonder if I will see the June/July '84 issue without re-subscribing. I am, therefore, enclosing 25 of my hard-earned dollars to insure uninterrupted delivery of the *Companion*, but there is one last concern.

I read recently that OCC will be out of Chapter 11 bankruptcy in 60 to 90 days. If this doesn't mean that there are any legal obligations to honor previous commitments (such as my previous subscription), I'm hoping that there's enough integrity left instill a moral obligation to do so.

Tony A. Hurd
San Francisco, CA

Note that the current issues are 76 pages (actually 80 if you count the cover). The "price per page" is higher but the advertising ratio is much smaller (it used to be over 60% ads, but now it's closer to 10%). This is not a condition we are striving for — this is the eco-

nomic condition the magazine is in right now, with its relatively small circulation (compared to other computer magazines). We are striving for circulation growth — looking for more "junkies" like you, and for new Osborne computer owners. The advertising revenue will increase as the circulation increases. As that happens, the number of pages will increase and perhaps the frequency will become monthly. However, to expect this right away is wishful thinking. Under any other circumstances the magazine would probably have vanished without a trace in Sept. of 1983.

When we considered re-starting this magazine, we thought it was ridiculous to try to do a monthly magazine with 60% advertising content. The advertisers weren't there. The only alternative was to put out what the subscribers and OCC could afford. The economics of start-up magazine publishing dictated our frequency, number of pages, and price. There is no "sugar-daddy" OCC to pay the type of enormous expenses that were accrued by the previous incarnation of the magazine.

As for OCC's philosophy, they speak for themselves in their advertisements. We don't agree with everything OCC does, and we welcome any criticism to publish in these pages. OCC pays considerable attention to the reader feedback generated by this magazine.

Sorry for the delays in the June/July (which ended being the August) issue. They were unavoidable. We are on schedule now and we should stay that way.

WordStar Upgrade?

I own an Osborne I, which I bought several years ago. I have since been able to update my SuperCalc disk and wondered if I can update WordStar.

I'm sure others would also like to know. Thank you.

Susanne Clark
Palatine, IL

WordStar can be upgraded for a price from MicroPro International, 33 San Pablo Ave., San Rafael, CA 94903. Phone number is (415) 499-1200.

Making "Flippies" Out of Floppies

People who use single-sided disk drives should be aware that there is a way to use the back side of [5¹/₄ inch] diskettes: Buy a diskette conversion kit known as FLIP-IT. Since dealers can double their profits by selling you two boxes of single-sided diskettes, it isn't surprising that you don't see or hear about FLIP-IT Kits too often. I have already converted about 60 of my single-sided diskettes and encountered no problems whatsoever. The kit was very easy and quick to use. The only time consuming factor was Formatting the reclaimed back side of my diskettes. However, now my computer's Format program has certified the back side of my diskettes just like it had always had to certify the front side of even my "brand new diskettes". Therefore I know I can use the back side with the same confidence I have in using the front side.

I ordered the FLIP-IT Kit from D/Punch Co. for about \$30.00 a kit. I recouped my investment after converting the first of my boxes of diskettes. They are located at P.O. Box 201, Newton Highlands MA. Their phone number is (617) 964-2126.

Willard Smith
Waban MA

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Onward and Upward

This issue is the first anniversary edition of the new Portable Companion. The employees at OCC are pleased with the over-all response and reaction to the magazine, and want to publicly acknowledge our appreciation to Tony Bove and Cheryl Rhodes for the fine job of editing they have provided. We hope to continue this relationship for a long time to come.

Now that we have passed through the hoopla of exiting Chapter 11, introducing the Vixen, and nearly completing our stock offering, OCC intends to concentrate on the task of building our value added reseller network in North America. We intend to have that task completed by the end of the summer, and to have technical support and products locally available to all regions of the United States and Canada by the fall of 1985.

The new Osborne is very appreciative of the loyal support and encouragement we have received from all of you during the past year. People have constantly remarked at how difficult it must have been for us to work our way out of the wreckage that was left from the Chapter 11 procedure. Our answer is that we undertook the task willingly, only after we discovered that we would not be "going it alone." Setting a small

minority of detractors and naysayers aside, the overwhelming majority of creditors, user groups, distributors and vendors have hung in there with us every step of the way. This is a people business after all, and collectively you have been great people to work with and for.

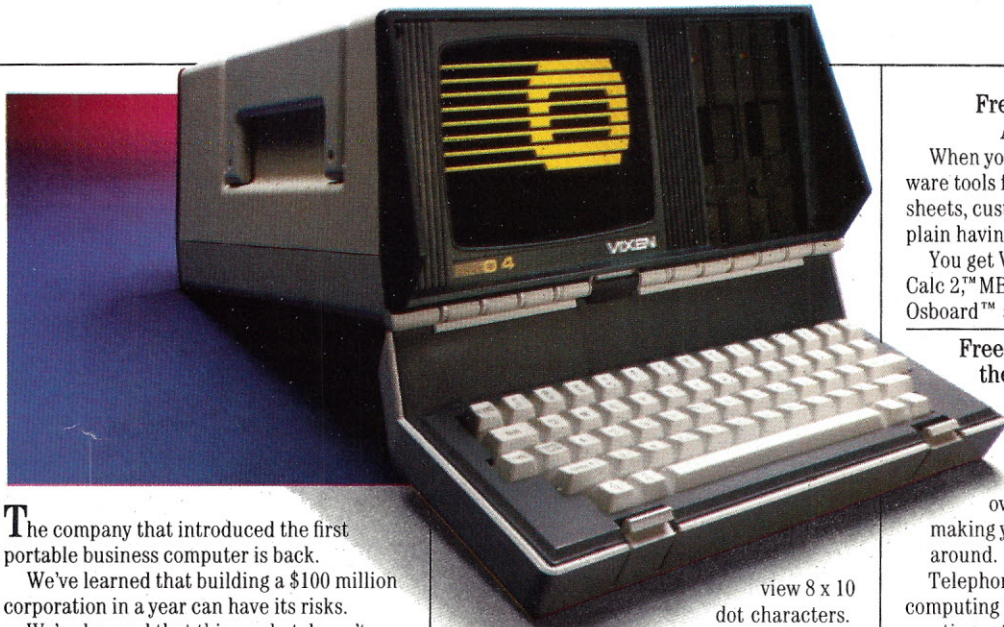
While we are very bullish on the prospects of the Vixen, because it truly is our flagship product, we are by no means disregarding the Osborne 1 or Executive. The 10 megabyte disk drive which interfaces to all three products is evidence of that. We believe that the Executive in particular still has a few tricks up its sleeve, and just like OCC, it too will refuse to die.

So much for reflections on the past. From this point forward it is onward and upward, and we invite you to continue to travel the path with us. The one thing about which we can all be certain is that it will continue to be eventful and exciting. We are just beginning to spread our new wings!

Ronald J. Brown
Chairman and President
Osborne Computer Corp.

**THIS IS THE COMPUTER WE WERE GOING TO
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INTRODUCING THE OSBORNE VIXEN.™



The company that introduced the first portable business computer is back.

We've learned that building a \$100 million corporation in a year can have its risks.

We've learned that this market doesn't need another IBM® clone.

And with all today's talk about windowing, 16- and 32-bit systems, we've noticed that the all time best-selling microcomputers are still the 8-bit Apple®s. They invite you to compare. So do we.

Like Apple, the Osborne computing concept has served certain people very, very well.

So well that over 100,000 of you have bought Osborne computers.

So well that to date, only a few computers have a bigger installed base.

The demand continues.

This is Vixen.

**The essence of the Osborne concept.
Yet improved in every respect.**

We took the best features of existing Osbornes and put them in a smaller case. With a bigger screen. 80-column display. And even faster response time. Result: The most powerful portable in its class. The Vixen is a fraction of the size of other Osbornes—yet it's *packed* with features lap-sized computers make you sacrifice.

Designed to endure.

Look what Osborne gives you now:

- Two double-sided, double-density, half-height 400K disk drives let you store up to 100 typed pages per disk.
- 7-inch diagonal, power-saving built-in amber monitor.
- 80-column, 24-line display with easy-to-

view 8 x 10
dot characters.

- Serial and parallel

ports let you connect the Vixen to any printer or modem.

- CP/M® operating system, for access to the huge library of CP/M productivity software.
- 90-day warranty.

All in one neat little package that is smaller than an IBM Selectric typewriter—and about half the weight!

And all for \$1298.

Take it away.

The Vixen is data-disk compatible with IBM PCs—and more.

Free Media Master™ software lets you exchange data diskettes between the Vixen and over 200 other computers, including the IBM PC.

Your computing capabilities just expanded 200 times over.

Free productivity software: An Osborne tradition.

When you buy the Vixen, we give you software tools for writing, for creating spreadsheets, custom programming, graphics and plain having fun.

You get WordStar®/MailMerge®, SuperCalc 2,™ MBasic,™ Desolation, Media Master,™ Osboard™ and TurnKey. Free.

Free Membership in FOG, the First Osborne Group: Support network, newsletter, and access to a huge library of public domain software.

Osborne will buy every Vixen owner an annual FOG membership, making you part of the largest user group around.

Telephone experts for answers to your computing questions. You can attend group meetings at over 300 locations. And take advantage of thousands of public domain software packages in FOG's ever-expanding library.

Fellow FOG members are a terrific source for tips on getting more from your Osborne. Thinking of buying a new program? Check its track record with FOG members who already use the package before you invest.

Here it is: Portable, powerful, reliable and data-compatible.

If you liked Osborne computers before, you will absolutely, positively, love this new machine.

OSBORNE

YES, I want to know more about the Vixen, Osborne's newest computer.

Osborne Computer
Corporation
42680 Christy Street
Fremont, CA 94538

Name _____

Address _____

City _____

State _____

Zip _____

Phone number () _____

☐ ***Send me more information on the Osborne external hard disk.***

GoodBye Small Spreadsheet.

	A	B	C	D	E	F	G	H
1	1	2	3	4	5	6	7	8
2	2	3	4	5	6	7	8	9
3	3	4	5	6	7	8	9	10
4	4	5	6	7	8	9	10	11
5	5	6	7	8	9	10	11	12
6	6	7	8	9	10	11	12	13
7	7	8	9	10	11	12	13	14
8	8	9	10	11	12	13	14	15
9	9	10	11	12	13	14	15	16
10	10	11	12	13	14	15	16	17
11	11	12	13	14	15	16	17	18
12	12	13	14	15	16	17	18	19
13	13	14	15	16	17	18	19	20

Introducing SuperSize SuperCalc² For Osborne Owners. The Start of Something Very Big.

Big Memory. Big Spreadsheets.

If you've been stopped by the MEMORY FULL message (and who hasn't), we've got the solution for you.

Available exclusively from WestWind, the expanded memory version of SuperCalc² for the Osborne 1 and the Executive is finally here!

SuperSize SuperCalc².

Combine it with the hi-speed RAM in our Drive C to create big spreadsheets for your big jobs.

Get our 192K Drive C, 384K Drive C or Drive C/Trantor hard disk

combination (TurboPac) with SuperSize SuperCalc² (SC²S) to get the big memory you've been waiting for!

The biggest news is the price. SuperSize SuperCalc² is included FREE with Drive C.

Now add big SuperCalc² spreadsheets to the list of big Drive C features that turn your Osborne into a dynamic, new computer.

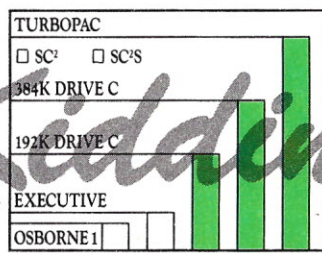
SC²S is a fully licensed version of SuperCalc². If you're a SuperCalc 1 user, you don't need to purchase the SuperCalc² upgrade (a \$125 value) to use SC²S. The

SuperCalc² Manual is available for only \$49 with the purchase of Drive C.

SuperSize SuperCalc² is not compatible with Osborne or Corvus hard disks.

For information call 415-652-3222. To order call TOLL FREE (800) 526-6500 (in CA (800) 831-3144).

Or write WestWind Computer at 1690 65th Street, Emeryville, CA 94608.



Spreadsheet Memory

WestWind
C O M P U T E R
FORMERLY DRIVE C & TRANTOR